HOME BUILDERS CATALOG

(PRICE TEN DOLLARS)

Compliments of

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"If It Goes in the Building — We Sell It"

GEORGE E. MAYCOCK

1929
HOME BUILDERS CATALOG

FOURTH EDITION

A Reference Work for Building Contractors, Building Supply Dealers, Architects and Home Owners — Containing Authentic Information on Building Materials and Home Equipment and Hundreds of Original Illustrations and Plans of All Types of Small Homes, Garages, Etc.

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DEDICATION

To Home Builders Everywhere

In the sincere hope, that through the aid of HOME BUILDERS CATALOG, the standard of living may be further raised, the design of homes improved, and their convenience and living comfort increased.

THE largest single investment ever made by the average family is the sum of money invested in a home. It is necessary, then, that every precaution be taken to safeguard this investment, and to make it a source of lasting satisfaction—the satisfaction that can be derived only from a home that is attractive in appearance, convenient in arrangement, and thoroughly well built of reliable and time-tested materials.

Investigation having shown that 90 per cent of the houses built in this country cost from $3,500 to $15,000, the homes illustrated in this book are confined to those coming within these price limits. HOME BUILDERS CATALOG is designed, not for millionaires, but for the multitude —for that great mass of people who are the life-blood of the nation and of whom Lincoln said, "God must have loved them because he made so many of them."

In the *Manufacturers' Section* of HOME BUILDERS CATALOG will be found authentic information concerning various classes of building material and other products necessary for the construction and equipment of the home. In the *Plan Section* are hundreds of attractive designs of homes, *each of which has actually been built.* The illustrations are made from photographs, giving a clearer idea of how the house looks than could possibly be conveyed by an imaginary sketch.

A careful study of the floor plans will reveal many unique features designed to add to the convenience and comfort of the home, without materially increasing its cost. Complete working blue-print plans of any house illustrated can be obtained through the building contractor whose name appears on the front cover of this book.

Of this 1929 edition of HOME BUILDERS CATALOG a minimum of 20,000 copies was guaranteed to be printed and distributed to leading building contractors who specialize in home construction. Copies are also on file in public libraries. With this broad distribution it is hoped and believed that the helpful information contained in this book will be available to hundreds of thousands of home builders, and will aid them, with the help of their building contractors, in securing more attractive, more substantial, more conveniently arranged homes than would otherwise be possible.

If this edition of HOME BUILDERS CATALOG *does not include all of the products in which you are interested, please communicate with us, as we can be of service to you in helping you locate them.*

Address

HOME BUILDERS CATALOG

75 *East Wacker Drive,* CHICAGO 521 *Fifth Avenue,* NEW YORK

HOW TO USE HOME BUILDERS CATALOG

To the Builder, Contractor and Dealer

HOME BUILDERS CATALOG is a careful compilation of the various materials and equipment necessary in the construction of homes that will be a credit to the builder and a source of pride and lasting satisfaction to the home owner.

It consists of three interesting and valuable sections, all within a single handy volume, instantly available for ready reference and accurate guidance.

It is intelligently indexed by listing of manufacturers' names; by products, alphabetically arranged; by trademarks, as applied to products in the catalog. Every house illustrated can be instantly found by reference to the Plan Section Index, where houses are classified by name.

The *Manufacturers' Section* is extremely valuable to everyone interested in home building. Here each concern represented in the catalog clearly describes and illustrates its product. Points out, through word and picture, why the product is particularly adapted to certain purposes. The various advantages are clearly stated and all particulars concerning the product and its uses are made clear to the reader.

The *Educational Section* is carefully prepared from authentic information secured from various sources, and is profusely illustrated, both in black and white, and in color.

It describes and illustrates typical examples of various styles of architecture as applied to small homes. States the advantages of each particular type. Gives a lot of sound advice on the proper selection of a home. Tells why good, reliable materials should be used.

There is an interesting chapter on plans, specifications and building contracts. A valuable article on financing the home. Tells how to select the home site, how house should be located on the lot to best advantage. Goes thoroughly into the details of every room, arrangement, etc. Gives valuable suggestions as to landscaping, interior treatment of rooms, artistic wall treatments, color schemes, and an almost endless array of those subjects which are of vital interest and inestimable value to home owners and contractor-builders alike.

There is a section (illustrated) devoted to Modernizing. Tells the wonderful possibilities offered through remodeling old homes to bring them up-to-date, make them convenient and comfortable.

A very large and complete *Plan Section* showing photographic reproductions of all styles of houses and garages, with complete floor plans in miniature. Many of the illustrations in this section are shown in color which brings out the beauty of architectural design and the many pleasing details of exteriors.

HOME BUILDERS CATALOG is a never-failing source of information and accurate guidance. Here, in one big volume, too large to mislay but convenient enough to be carried, is *everything* anyone wants to know about small house construction, and every product necessary to build an ideal home.

Homes are built that families may live in comfort. No matter how modest a home may be it must be well planned and carefully built. It must afford the utmost in convenience and living-comfort. It must be attractive. Lacking any of these essentials it is merely another house—not a home.

HOME BUILDERS CATALOG is a book of distinctive house designs. Nowhere else will you find so much variety in style and exterior treatments. Such unusual architectural excellence. Such carefully conveniently-planned interiors.

Every detail is clearly shown and carefully described. Each house illustrated has an individuality that sets it apart from the ordinary, stock-plan house. Every house

has been actually built from the plans we furnish you —so all guesswork is eliminated. You can start, and go right through to completed construction, without mistakes or delays. And, when the house is finished, there is a satisfied customer who takes pride in a house that is every inch a home.

It really costs less to build a well designed house than one that is poorly designed because, in the well designed house, every possible saving in labor costs and materials is provided for. Part of the money saved, because of careful design, can be used to good advantage in purchasing better materials, thus producing a home, well built, from the best material obtainable—a home of permanence, and lasting satisfaction.

It is safe to say that there is no page in HOME BUILDERS CATALOG that does not contain something of interest and value to the home owner and builder. It is well worth the reading and study that has been given to past editions and which this present edition will undoubtedly receive and warrant.

HOME BUILDERS CATALOG creates the desire for better homes and plainly shows through its three great sections—*Manufacturers' Section, Educational Section* and *Plan Section,* the many improvements and conveniences that can be so easily and economically incorporated in even the most modest of homes.

To the layman, the construction of a home is more or less mysterious. This often influences people to buy a house already built rather than go through, what seems to them, a perplexing problem.

But with the aid of HOME BUILDERS CATALOG all difficulties, all mystery disappear. Every detail, every step in home construction is made clear. With HOME BUILDERS CATALOG open before you, you can show your prospect just how the finished house will look.

He can go through every room. See, from the *Manufacturers Section,* each kind of material you propose to use. Together, you can check material for walls, partition and roof construction, flooring, interior and exterior trim. Select the heating system, hot water supply, bathroom and laundry fixtures, the many built-in, time-saving, comfort-bringing conveniences.

Nothing, excepting the actual building of the house, will give your prospect so clear an idea of what his finished home will look like, of the splendid service you can render. And, because every detail is made clear at the beginning, confidence is instilled in the prospect's mind.

Should a prospect express a desire for frame, brick, structural tile, concrete block, cinder concrete block, stucco, stone or any specific construction, first turn to the *Plan Section,* and show him the numerous designs where the construction he favors is used. Then, refer to the *Manufacturers' Section.* There will be found, under the proper classifications, complete information concerning all of the materials you are interested in, together with hundreds of interesting illustrations, many of them in color.

In turn, every detail of the house in mind can be easily and accurately checked from the *Manufacturers' Section* and the proper material or unit desired can be selected from the scores of reliable and time-tested products so clearly illustrated and described there.

The Plan Service developed, produced and supplied by HOME BUILDERS CATALOG is complete in every way.

It comprises working *Blue Print Plans* of every house and garage illustrated, together with *Material Listing Guide, Complete Specifications,* and *Legal Contract Forms.*

The use of this *Service* insures accuracy and economy in construction. Estimates free from errors. A thoroughly satisfied customer, because all agreements and understandings are clearly stated, and nothing is left to guesswork or imagination.

Good homes must be started right—and accurately drawn plans, made from good designs, are absolutely essential if construction is to be all that it should be.

Our plans are accurately prepared by skilled architects and carefully trained draftsmen. Men with a broad experience and thorough knowledge of building design and construction, and with years of specialization in small house design. These plans, while thoroughly adequate in every way, are simple and easily understood.

Dimensions, sizes, details and directions are completely and accurately given. Figures clearly show that sizes of all lumber, beams, footings, masonry walls, etc., are of sufficient size to safely carry the loads and withstand the stresses put upon them.

Floor plans can be reversed so that the house can be faced to any desired exposure. Changes in room dimensions or arrangement can be made. Special features can be added. Changing plans to meet individual preferences or include "pet" ideas requires only a few days' time, and the work is done by competent architects at a small cost. Special plans can be designed to order as we have a well equipped Architectural Department maintained for that service.

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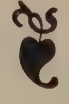

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ALPHA PORTLAND CEMENT

Manufactured by ALPHA PORTLAND CEMENT COMPANY

Baltimore	Battle Creek, Mich.		Birmingham, Ala.
Boston	Chicago	Easton, Pa.	Ironton, Ohio
New York	Philadelphia	Pittsburgh	St. Louis

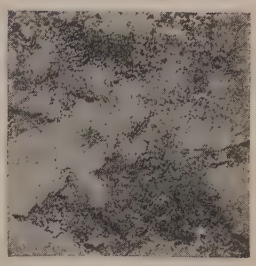
Product:

The one product of the Alpha Portland Cement Company is ALPHA CEMENT, made only in one grade and sold always on the guarantee that it will more than meet standard specifications adopted by the American Society for Testing Materials, and approved by the American Engineering Standards Committee.

ALPHA CEMENT is furnished ordinarily in cotton sacks (see illustration below), carrying 94 pounds net—approximately one cubic foot of actual cement—but will be supplied also in paper containers or in bulk carload shipments without containers.

ALPHA CEMENT is one of the oldest American brands and won its reputation in the days when foreign-made cements were used generally in America because of supposed superior quality. Hourly tests during manufacturing process insure uniform ALPHA quality.

Torn float finish



Floated rough cast finish

Two examples of many surface suggestions easily obtainable with ALPHA CEMENT

Suggested Uses:

ALPHA CEMENT will give the best results in every type of improvement calling for a high-grade Portland Cement. The requisites are simple—that it be thoroughly mixed with proper proportions of water and suitable aggregates—clean sand and crushed stone, gravel or pebbles, slag, or other approved coarse aggregate. All cement improvements should be reinforced at points that undergo strain.

ALPHA CEMENT improvements, whether for the home building proper or for supplementary improvements for the yard or farm, have much in their favor. They can be made rust-proof, rat-proof, rot-proof, fireproof, water-proof. A pleasing variety of surface finishes for outside walls is easily obtainable. This variety may be increased by the use of suitable coloring matter in the mortar. "Tile-red" floors for sun parlors and porches are very popular. The Alpha Cement Handbook, illustrated on this page, gives formulas for obtaining these color effects, whether for walls of house or for porches, walks, gate-posts, etc. ALPHA CEMENT stucco mortar is applied directly to the surface of coarsely finished cement block with satisfying results. Such an exterior looks well and requires no painting.

Colored floors in the style of tile may be had for sun parlor and porch at minimum expense.

Tables for Use of ALPHA CEMENT:

In addition to the table shown at the bottom of this page, the ALPHA CEMENT literature contains many other useful tables.

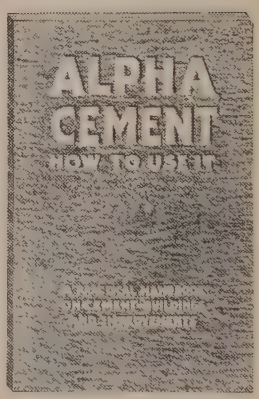
Directions for Placing a Stucco Coat:

Drench the masonry and cement block walls thoroughly with water, but let drain off before applying the stucco. Apply the stucco continuously in one direction, and do not let the edges dry up. Work stucco coats only to the extent that is absolutely necessary. Keep mortar coats wet for several days. Apply water as soon as each coat has hardened enough so that it will not wash. Apply the finish coat only after previous coats have been cured for at least one week. Use only wood float to prepare the finish coat for final surface finishing.

ALPHA CEMENT Literature

Alpha Cement Dealers in nearly all populous communities will be pleased to supply contractors and property-owners with a variety of literature and Service Sheets. These show designs for scores of permanent and handsome improvements made possible through the use of ALPHA CEMENT, such as steps, porches, retaining walls, driveways, storage cellars, garages, yard furniture, tennis courts, culverts and drains, septic tanks, hotbeds, cisterns, well caps, posts, pools, etc. Prominent in the list of literature is the valuable Handbook shown on this page, containing 112 freely illustrated pages, suggesting good plans and the most approved methods of building. If the reader doesn't know a nearby Alpha Cement Dealer, he should write direct to the Alpha Cement Company's nearest office for a copy of this practical Handbook.

Special pamphlet on simple methods of securing **high early-strength concrete** with ALPHA CEMENT of standard quality also free on request.

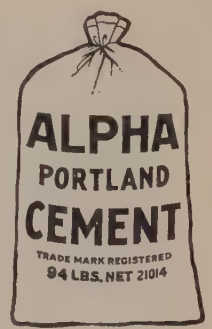


The ALPHA CEMENT Handbook

Materials Required for 100 Square Feet of Sidewalks and Floors—for Various Mixtures and Thicknesses

Thickness of Course in Inches	Wearing Course 1:½		Wearing Course 1:2		Base Course 1:2:3			Base Course 1:2½:4			Base Course 1:2½:5		
	Cement	Sand	Cement	Sand	Cement	Sand	Stone*	Cement	Sand	Stone*	Cement	Sand	Stone*
½	2.4	0.13	2.0	0.15	.....	.....	.....	.....	.....	.....	.....	.....	.....
1	4.8	0.26	3.9	0.29	.....	.....	.....	.....	.....	.....	.....	.....	.....
1½	7.2	0.40	5.9	0.43	.....	.....	.....	.....	.....	.....	.....	.....	.....
2	9.6	0.53	7.9	0.58	.....	.....	.....	.....	.....	.....	.....	.....	.....
3	.....	.....	.....	.....	6.5	0.48	0.72	5.2	0.48	0.77	4.6	0.43	0.86
4	.....	.....	.....	.....	8.6	0.64	0.95	6.9	0.64	1.02	6.2	0.57	1.14
5	.....	.....	.....	.....	10.8	0.80	1.19	8.6	0.80	1.27	7.7	0.71	1.43
6	.....	.....	.....	.....	12.9	0.96	1.43	10.3	0.95	1.53	9.2	0.86	1.72

Quantities of ALPHA CEMENT are expressed in sacks, aggregates in cubic yards.
*The word Stone is used to mean screened gravel (pebbles) as well as broken stone.



Standard sack of Alpha Cement, containing 94 lbs. net.

ALPHA PORTLAND CEMENT COMPANY, Easton, Pa., or Chicago, Ill.

ATLAS PORTLAND CEMENT GRAY & WHITE

Main Offices: New York — St. Louis

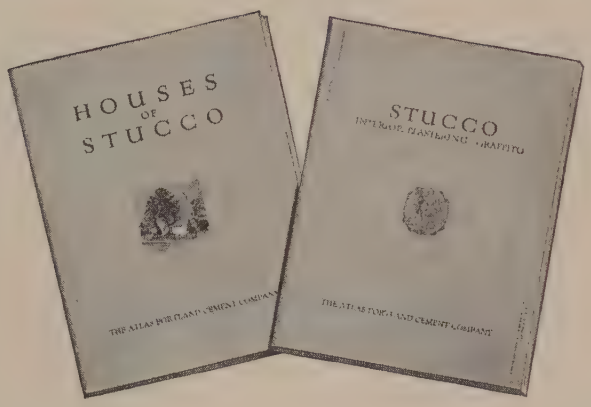
Manufactured by THE ATLAS PORTLAND CEMENT CO.

25 Broadway, New York

Boston Albany Philadelphia Chicago Des Moines Omaha Kansas City Oklahoma City Waco Birmingham

Atlas Portland Cement

Every home builder is interested in insuring for his house the two qualities on which Atlas national advertising is laying such stress. They are *Dependability* and *Permanence*, the true measure of quality in portland cement. That Atlas gives both consistent performance and assured permanence is strikingly demonstrated by its repeated specification for important projects by great engineering organizations.



For example, fifteen years ago New York Central Railroad, insuring—as always—safety, service, and long life, chose Atlas Portland Cement for the Grand Central Terminal and Electric Zone in New York City. Again in 1924 for the Castleton Cut-Off Bridge over the Hudson, termed by its president "one of the engineering marvels of the age", the New York Central again specified Atlas. This repeated choice in effect counsels all who contemplate building a suburban home, a sidewalk, or a skyscraper to specify Atlas—"the standard by which all other makes are measured." From foundation to roof covering, for anything you want to build, use Atlas.

Atlas White Portland Cement

With all the high tensile strength, permanence, and economy of gray Atlas Portland Cement, Atlas White has an additional and striking advantage: it is pure white in color. Thus it offers a vastly enlarged range of artistic possibilities and unrivalled opportunity for a full use of color variety. Architects have been enabled to specify even decorative sculpture of concrete. Atlas White has been of tremendous importance in opening new vistas of beauty never before realized in cement construction.

Superior for Stucco

The great charm of stucco lies not only in its interesting surface texture but also in the purity and cleanness of its delicate shades and tints.

Atlas White Portland Cement is admirably adapted to color varieties, since it offers a perfectly neutral white base for all colors. Thus it permits effects not possible when gray cement is used.

"Houses of Stucco" is a copiously illustrated book for the home builder. It gives comparative costs, illustrates a variety of textures to suit varying types of architecture, has photographs of many model dwellings together with miniature floor plans, and even discusses the remodelling in stucco of old houses. It is a mine of information, and is free on request.

For Interior Plastering

The recent revival of interest in Spanish and Moorish decoration has given added impetus to the vogue for texture treatment of the interior finishes. Because of the greater strength it gives, Atlas White is widely preferred. Since the beauty of most of the textures depends on the definition and sharpness of the various projections, it is highly important that they be strong. Otherwise they are continually chipped off, and their true beauty departs.

Mortar of Atlas White Portland Cement supplies the necessary strength. In addition it is not affected by moisture or water; and may be thoroughly scrubbed with soap and water.

"Stucco—Interior Plastering—Graffito" is an informing, liberally illustrated book which discusses and describes the application of stucco, coloring, texture, and interior plastering. A concise handbook of information of great value to home builders and contractors. Write for it.

Lumnite

Frequently the need arises for extraordinary speed in construction and early use of the completed work. For such demands the Atlas Portland Cement Company offers Atlas Lumnite Cement, through an arrangement with its affiliated company, The Atlas Lumnite Cement Company.

Lumnite is not a portland cement. In 24 hours it produces concrete which exceeds the strength of portland cement concrete at 28 days.

Ask for folders giving suggestions for using.

Let Atlas help you

It matters not what you are planning to build, Atlas will appreciate the opportunity of helping you. Practically everything that can be made with cement is discussed and explained in some one of the library of building books that the Atlas Service Department has prepared. Each of these is a highly instructive and absolutely practical handbook of information on its subject. Each tells what results may be obtained and how to do the work.

For advice or suggestions on all uses of Atlas Portland Cement, gray or white; and Lumnite; or for helpful construction information on any type of concrete work, please address or call on the nearest office listed above.

THE ATLAS PORTLAND CEMENT CO., 25 Broadway, New York

EDISON PORTLAND CEMENT

Made by EDISON PORTLAND CEMENT CO.

250 Stuart St., Boston, Mass. 261 Fifth Ave., New York 20 S. 15th St., Philadelphia, Pa.

Thomas A Edison
Founder

The Product:

All Edison Portland Cement is produced in one mill located at New Village, N. J. It is a cement of uniformly high quality and has met every specification of the American Society for Testing Materials before, as well as after the specifications have been adopted. Edison Cement may be bought in either paper or cloth bags.

Edison Portland Cement is ideal for use in stucco treatment, as well as for foundations, basement floors, walks and walls.

Preparing the Mix:

Whenever Portland Cement can be used, Edison, will be found safe and satisfactory. Among the common purposes are for stucco, foundation walls, floors, sidewalks, driveways, steps and curbs. In the table below will be found mixtures and maximum size stone for various types of concrete work. At all times the aggregates—sand and stone—should be clean and well-graded. It is best to use the same measure throughout the job, so that the proportions of the different ingredients will be accurate.

Tables of Mixtures and Maximum Size Stone:

		Max. Size Stone
1:1:1½	Mixture for:	
	Wearing course of two-course pavements	¾"
1:2:3	Mixture for:	
	One course walks, porch and basement floors, pavements and steps	1½"
	Fence posts, gate posts, benches	¾"
	Sills and lintels without mortar surface	¾"
	Wells and cisterns, watering troughs, tanks	1"
	Basement walls exposed to moisture	1½"
1:2:4	Mixture for:	
	Foundations for farm machinery	2"
	Concrete work in general	1½"
1:2½:4	Mixture for:	
	Coal bins, grain bins, silo walls, and such	1½"
	Building walls above ground	1½"
	Walls of pit or basements	1½"
	Base of two-course floor or pavement	2"

Mortar:

1:2	Mixture for:	
	Wearing course of two-course walks, floors and pavements	¼"
	Flower boxes	¼"

A 1:2:3 mixture means 1 sack (1 cu. ft.) of cement, 2 cu. ft. of sand, and 3 cu. ft. of pebbles or stone. The first figure is for cement, second for sand, etc.

An ordinary residence becomes distinctive when given the warmth and color of Edison Portland cement stucco

Manufacturing Standards:

The Edison mill is from a standpoint of productive capacity, one of the five largest in the country. Limiting production to one large mill means that the cement is always uniform. All the raw materials go through the same machinery—much of it the invention of Thos. A. Edison. Vigilant chemical control at the mill is backed up by the work of an independent laboratory which constantly samples, tests, and analyzes the cement to check against the results obtained by the Edison staff.

Service:

The building material dealer is the Edison representative in your territory. He has the best facilities to give quick service. Supporting him are the large storage bins and modern bagging and shipping equipment at the mill. Orders given at the mill and are filled ordinarily within 24 hours—a feature of Edison service. The central location of the mill gives fast and direct freight routes to all points in New England and the Middle Atlantic States.

Edison in Construction:

Following are a few large and well known enterprises in which Edison Portland Cement has been used to give strength and permanency to the concrete work: Yankee Stadium, New York City; Traymore Hotel, Atlantic City, N. J.; Capitol Theatre, New York City; E. F. Albee Theatre, Brooklyn, N. Y.; U. S. Shoe Machinery Co., Beverly, Mass.; The Shandaken Tunnel, Shandaken, N. Y.; Bond Electric Corp., Jersey City, N. J.; Soldiers and Sailors Memorial Bridge at Harrisburg, Pa.

Further Information:

Our Service Department will be glad to furnish you information on the materials required for concreting a given surface of established depth. A new series of folders covering the practical uses and advantages of concrete in modern home construction, including methods of waterproofing cellars and repair work, will be sent free on request.

Any design or location can be handled to best advantage with the great variety of original textures and colors offered in stucco

THE EDISON PORTLAND CEMENT CO., 261 Fifth Ave., New York

PENN-DIXIE CEMENTS

PENNSYLVANIA

A PENN-DIXIE CEMENT

DIXIE-ROYAL

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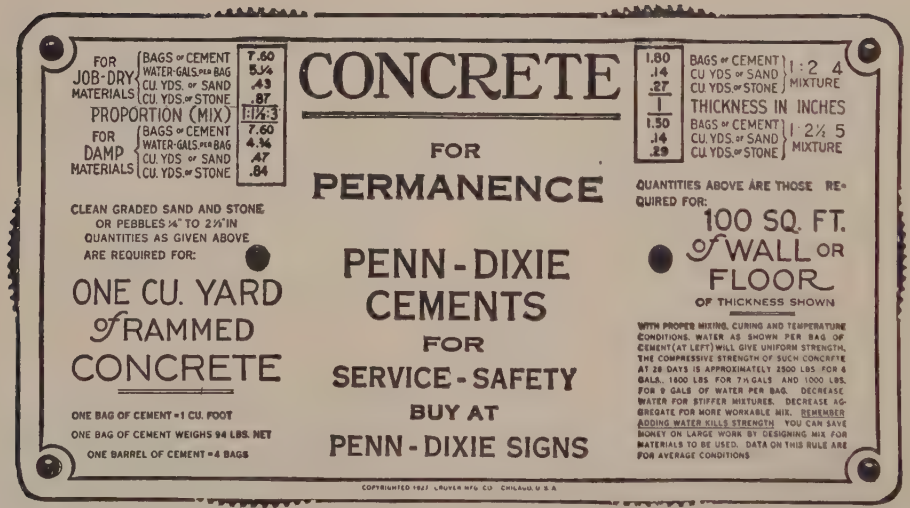
CONCRETE
FOR
PERMANENCE
PENN-DIXIE CEMENTS
FOR
SERVICE-SAFETY
BUY AT
PENN-DIXIE SIGNS
FOR JOB-DRY MATERIALS
BAGS OF CEMENT 7.60
WATER-GALS. PER BAG 5¼
CU. YDS. OF SAND .43
CU. YDS. OF STONE .87
PROPORTION (MIX) 1:2½:3
FOR DAMP MATERIALS
BAGS OF CEMENT 7.60
WATER-GALS. PER BAG 4.¼
CU. YDS OF SAND .47
CU. YDS. OF STONE .84
CLEAN GRADED SAND AND STONE OR PEBBLES ¼" TO 2½" IN QUANTITIES AS GIVEN ABOVE ARE REQUIRED FOR:
ONE CU. YARD OF RAMMED CONCRETE
ONE BAG OF CEMENT = 1 CU. FOOT
ONE BAG OF CEMENT WEIGHS 94 LBS. NET
ONE BARREL OF CEMENT = 4 BAGS
1.80 .14 .27 1 BAGS OF CEMENT / CU YDS OF SAND / CU YDS. OF STONE 1:2 4 MIXTURE
THICKNESS IN INCHES
1.50 .14 .29 BAGS OF CEMENT / CU. YDS. OF SAND / CU YDS. OF STONE 1:2½ 5 MIXTURE
QUANTITIES ABOVE ARE THOSE REQUIRED FOR:
100 SQ. FT. OF WALL OR FLOOR
OF THICKNESS SHOWN
WITH PROPER MIXING, CURING AND TEMPERATURE CONDITIONS, WATER AS SHOWN PER BAG OF CEMENT (AT LEFT) WILL GIVE UNIFORM STRENGTH. THE COMPRESSIVE STRENGTH OF SUCH CONCRETE AT 28 DAYS IS APPROXIMATELY 2500 LBS. FOR 6 GALS. 1600 LBS. FOR 7½ GALS AND 1000 LBS. FOR 9 GALS OF WATER PER BAG. DECREASE WATER FOR STIFFER MIXTURES. DECREASE AGGREGATE FOR MORE WORKABLE MIX. REMEMBER ADDING WATER KILLS STRENGTH. YOU CAN SAVE MONEY ON LARGE WORK BY DESIGNING MIX FOR MATERIALS TO BE USED. DATA ON THIS RULE ARE FOR AVERAGE CONDITIONS
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ACTUAL SIZE REPRODUCTION OF CONCRETE AND LUMBER SCALE

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PENNSYLVANIA-DIXIE CEMENT CORP.

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New York City

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Chattanooga, Tenn.

COMMON BRICK—A STANDARD BUILDING MATERIAL

Made by Nearly 400 Members of

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These District Association Offices and Brick Manufacturers Everywhere Are at Your Service:

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- - - - - 2124 Guar. Title Bldg.
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- - - 508 Com. National Bank Bldg.
SALT LAKE CITY - - - 301 Atlas Block
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The qualities of common brick, the world's oldest building material, are too well known to need extended description. Common brick builds into masonry which possesses ample strength, the highest fire resistance, high resistance to the passage of heat and sound and which maintains its beauty and integrity for centuries.

No building material meets all structural requirements more completely and satisfactorily than does common brick.

The home builder, whether he be owner, contractor, investment builder, or what not, should carefully consider the following facts regarding common brick structures, particularly homes.

A Common Brick Structure

Costs but little, if any, more to build than those of less enduring materials.

Is known by all concerned to possess all those virtues most desired—permanence, fire safety, comfort, freedom from upkeep expense, beauty and distinction.

Commands a larger and more easily obtained building loan.

Maintains its value, without constant upkeep expense.

Reduces resistance in a first sale.

Has a high resale value.

Can be a beautiful structure in any architectural style; the combination of a wide variety of brick colors and textures and of wall patterns, bonds and mortar joints makes an almost endless number of beautiful wall textures and effects easy of accomplishment.

Is made from a material supplied locally in every part of the United States.

Common Brick in a California Home

Helpful Books Are Available

HOMES OF LASTING CHARM. Photographs and plans of 120 modern brick homes, all built and occupied by satisfied owners. Many designed by architects of national reputation. Working drawings and specifications available at nominal cost. 25 cents.

MULTIPLE DWELLINGS. Photographs and plans of attractive double and row houses in brick. Working drawings at nominal cost. 10 cents.

BRICK—HOW TO BUILD AND ESTIMATE. A complete manual of brick construction including important and useful data and tables of required material quantities. 25 cents.

THE HEART OF THE HOME. Beautifully illustrated brick fireplace designs with complete directions for proper construction. 25 cents.

SKINTLED BRICKWORK. Photos and details showing how to obtain these interesting and attractive wall surfaces. 15 cents.

REINFORCED BRICK STORAGE STRUCTURES AND SILOS. Full information and data on these economical brick structures including complete construction directions. 15 cents.

MORTAR. All the essential information about mixing and using all kinds of mortar. Free.

FARM BUILDINGS OF BRICK. Photographs and plans of brick farm buildings—barns, dairy houses, poultry house, shop, garages, etc. Designed by agricultural experts. Working drawings at nominal cost. 5 cents.

FARM HOMES OF BRICK. Photographs and plans of homes specially designed to suit the farmers' needs by agricultural experts. All built and occupied. Drawings at nominal prices. 5 cents.

Common Brick in an Illinois Home

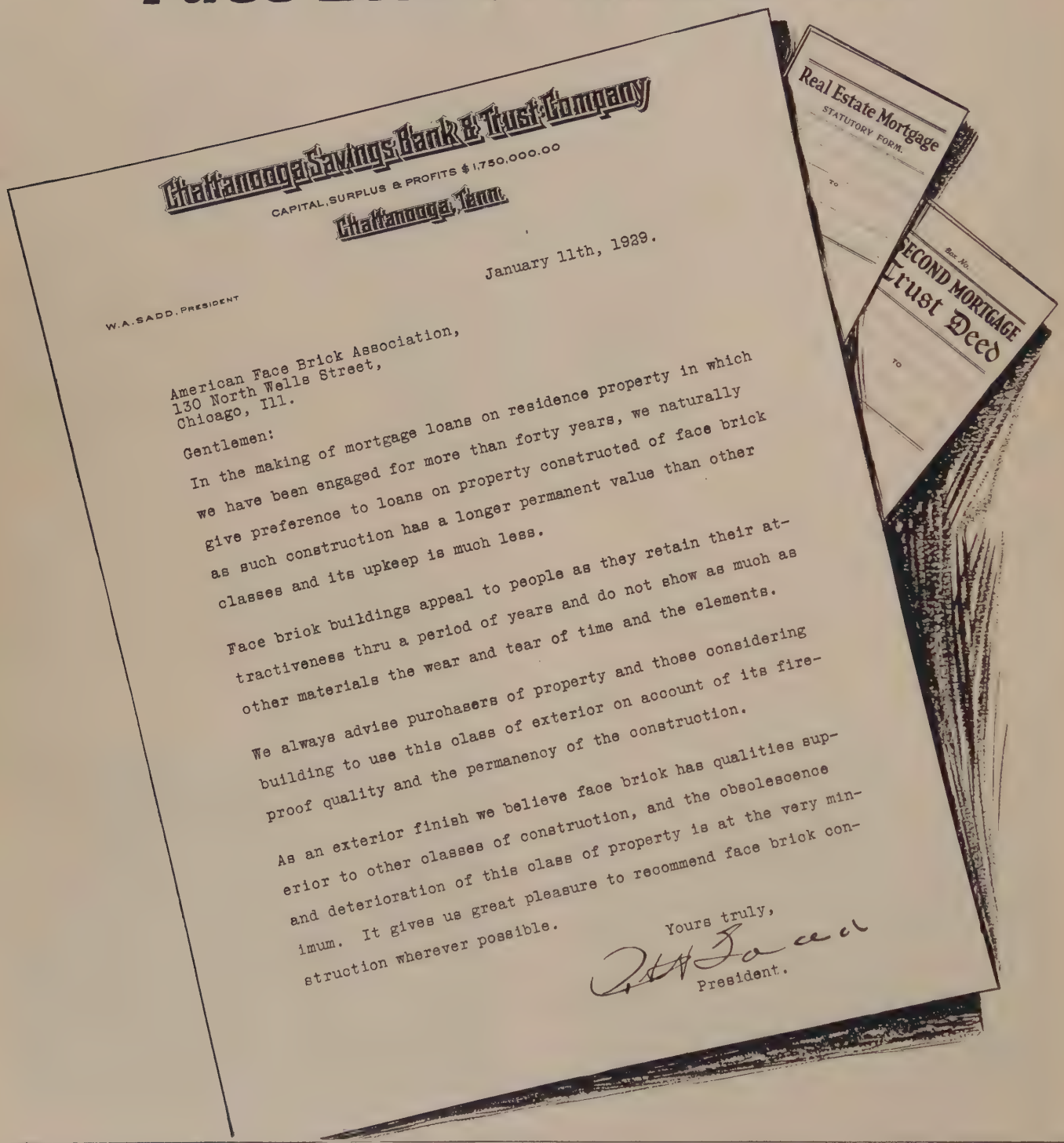
Common Brick in a New York Home

THE COMMON BRICK MFRS. ASSN. OF AMERICA, Cleveland, Ohio

AMERICAN FACE BRICK ASSOCIATION

2198 City State Bank Building, CHICAGO, ILLINOIS

READY MONEY FOR LOANS ON *Face Brick Construction*



Chattanooga Savings Bank & Trust Company

CAPITAL, SURPLUS & PROFITS $1,750,000.00

Chattanooga, Tenn.

W. A. SADD, PRESIDENT

January 11th, 1929.

American Face Brick Association,
130 North Wells Street,
Chicago, Ill.

Gentlemen:

In the making of mortgage loans on residence property in which we have been engaged for more than forty years, we naturally give preference to loans on property constructed of face brick as such construction has a longer permanent value than other classes and its upkeep is much less.

Face brick buildings appeal to people as they retain their attractiveness thru a period of years and do not show as much as other materials the wear and tear of time and the elements.

We always advise purchasers of property and those considering building to use this class of exterior on account of its fireproof quality and the permanency of the construction.

As an exterior finish we believe face brick has qualities superior to other classes of construction, and the obsolescence and deterioration of this class of property is at the very minimum. It gives us great pleasure to recommend face brick construction wherever possible.

Yours truly,

President.

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STATUTORY FORM.
TO

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TO

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"..... the FACE BRICK house is by far the easiest to sell"

Des Moines, Iowa
June 8th, 1928

American Face Brick Association,
130 North Wells Street,
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Gentlemen:

For $8,500.00 or less, we are building to order in Des Moines attractive and substantial Face Brick houses of six or seven rooms.

Ninety-five per cent of the houses we build are of Face Brick. The excellence of the houses we have sold during the last few years and our easy financing plan - - made practical by the way Face Brick dwellings hold their value - - keeps our crews busy building to order. Our 1928 program promises to reach forty houses.

Many prospective buyers refuse to look at any but Face Brick homes. The advantages of this type have been so well established through advertising and person-to-person recommendation that the Face Brick house is by far the easiest to sell.

Yours very truly,
J. C. FERGUSON REALTY COMPANY, Inc.,
By Oscar L. Powell
Treasurer.

Face Brick is as Stylish as it is Economical!

The wide choice of variegated color is only one of the many features which contribute to Face Brick popularity, style and value.

In order that you may better understand the permanent advantages and economies of Face Brick, select one or more of these books, send us your name and address—your choice of books will come by return mail.

A book full of usable ideas for home builders—few could afford to employ the talent represented in this book. Also comparative cost data, information on basic construction requirements and other facts. Ask for **"The Story of Brick."** It's free.

In **"Face Brick Bungalows and Small House Plans"** there are 128 designs for smart, convenient, economical homes. Separate booklets on 3 and 4-room homes, 5-room, 6-room, 7 and 8-room. Each 25 cents. Entire set $1.

Famed architects produced 50 prize plans for the 2-story 6-room homes found in **"The Home of Beauty."** Yours for 50 cents.

"A Manual of Face Brick Construction," 116 pages, a text book on three types of Face Brick wall construction, giving the contractor all the information he needs in building Face Brick houses. Sent for 50 cents.

Modernize is the modern idea for older homes. How to do it right—told in **"A New House for the Old."** Sent free.

The most attractive and practical Fireplace designs—in "The Home Fires"—25 cents.

If you live in Canada, please write to 26 Queen Street, East, Toronto, Ontario

AMERICAN FACE BRICK ASSOCIATION

2198 City State Bank Bldg. Chicago, Illinois

THE GREENDALE BRICK COMPANY

Manufacturers of "Greendale" Face Brick

General Offices:, Logan, Ohio

DISTRIBUTORS

Atlanta, Ga., B. Mifflin Hood Brick Co.
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Washington, D. C., O. W. Ketcham

and in all leading cities

"Greendale"
TRADE MARK
FACE BRICK

Product:
A complete line of Face Brick sold under the trade name "Greendale." Suitable for every type of construction from the simplest bungalow to the most elaborate office building or public structure.

Characteristics:
"Greendales" are made from clays of unusually high and uniform quality, mined on our own properties. "Greendales" are thoroughly burned, vitrified, and retain their original beauty. Age and weathering only serve to enhance their beauty. They can be obtained in an unlimited variety of color tones ranging through various shades of red, buff, brown and gray. "Greendale" brick are assorted in uniform shades and can be blended in any percentage. The popularity of "Greendale" Brick is widely recognized because of their distinctive texture and wonderful color harmony.

"Greendale" Rug Brick:
The texture of the "Greendale" Rug when laid in a wall gives the appearance of the soft and alluring color tones of a Turkish or Persian rug.

Shades—No. 72 Light Ivory; No. 74 Cream; No. 76 Light Buff; No. 78 Medium Buff; No. 80 Dark Buff with pinkish cast; No. 86 Flashed Grayish Brown; No. 88 Light Brown, tan cast; No. 90 Medium Brown; No. 92 Dark Brown; No. 94 Gun Metal.

"Greendale" Semi-Smooth:
This is a new and unusual texture and is the result of much study and experiment to meet the insistent demand for a brick in the large cities which will resist the effects of smoke and dust and still produce a light wall effect. The texture is sufficiently rough so as not to give a wall the glaring effect of a smooth brick, but still removes the objection which many architects and owners feel toward the use of rough texture brick.

"Greendale" Red Rug Brick:
Manufactured from selected shale and burned to a rich Burgundy Red. Manufactured for blending purposes only and not offered for sale as a straight line.

"Greendale" Blends:
Pontiac Potpourri—A combination of gray, brown, gun metal and red Rugs; especially appropriate for certain types of churches, apartments and residences. Color card on request.

Seville—A blend of "flashed" grayish brown shades which can be readily adapted to Spanish types of architecture. This blend produces a light wall effect yet the colors are neutral to dust and dirt. Color card on request.

561 Full Range—A blending of all clear burned Rug shades running from light ivory to dark buff. Natural cement or buff mortar color is very appropriate with this blend. Illustration on opposite page.

563 Full Range—A blending of all "flashed" Rug shades running from gray to gun metal. Effective when laid in natural cement or double strength chocolate mortar with raked joints. Color card on request.

Cordova Blend—A blending of colors ranging from light ivory through various tones of grays, buffs, pinkish hues and light tans. A vast assortment of shades beautifully blended. Illustration on opposite page.

Barcelona Blend—A special array of color in grays, buffs, lavender cast and light tan. Distinctive in appearance and unique in effect.

Knickerbocker Blend—Comprising an extremely wide color variation through all the shades of gray and buff into tans and light brown. Very striking and unusual.

261 Full Range (Semi-Smooth)—Is furnished in the same range of color as the 561 Full Range. (See color illustration on opposite page.) However, this color range can be modified by leaving out the lighter or darker shades so as to give a more uniform effect.

262 (Semi-Smooth)—Harmony of color and quiet in wall effect, is this "Greendale" Semi-Smooth shown in illustration on opposite page. The color range can be modified to suit the particular taste.

Plant and Facilities:
"Greendale" Face Brick is manufactured at Greendale, Ohio, in one of the largest individual plants in the country. The tract consists of about 2200 acres containing deposits of rich clay ideally adapted to the manufacture of superior face brick. A tunnel kiln recently completed gives a capacity of about 32,500,000 bricks annually. Large production and central location insure prompt and efficient service.

Information:
"Greendale" distributors will be found in the principal cities where displays of brick may be seen and literature obtained. Samples are also on display at the Architects Samples Corporation, New York City. Inquiries addressed to our general offices at Logan, Ohio, will receive immediate attention. Samples and color cards on request.

THE GREENDALE BRICK COMPANY, Logan, Ohio

"Greendale" Cordova
A remarkable color range combining rare beauty, warmth and charm.

"Greendale" Shade 262 (Semi-Smooth)
An unusual texture produced in color tones particularly adapted to large structures.

"Greendale" Shade 561 Full Range
A wall of this shade is a study in masonry with every harsh feature common to other light brick eliminated.
The same colors are produced in Semi-Smooth texture.

FACE BRICK *by* METROPOLITAN

Largest Brick Manufacturer in the World

Operating Eight Plants in CANTON, OHIO, MINERVA, OHIO, BESSEMER, PA., OLEAN, N. Y.

MEMBERS *of* THE AMERICAN FACE BRICK ASSOCIATION

Products

METRO Face Brick
METRO Common Brick
Hollow Building Tile
METRO Paving Brick
METRO Vitrified Floor System for Trickling Filters.

Face Brick for Every Need

METRO MATTS—Two distinctive textures in brilliant colors from red to black and green.

METRO VERTEX—Mechanically perfect in seven colors from red to black.

METRO COLONIALS—Smooth face brick that are superb in their natural colors.

METRO ENGLISH ART—Clinkers in a riot of colors and shapes which produce beautiful walls.

METRO TAVERNS—Four blends of semi-smooths varying from old rose to yellows and bronzes and slightly distorted brick. No glaze, but dull soft colors.

METRO GEORGIANS—A sand-mold brick finish served in three blends—Full Range, Red Range and Extra Wide Range. This brick has the age-old effect so necessary for certain architectural effects.

Recent Operations

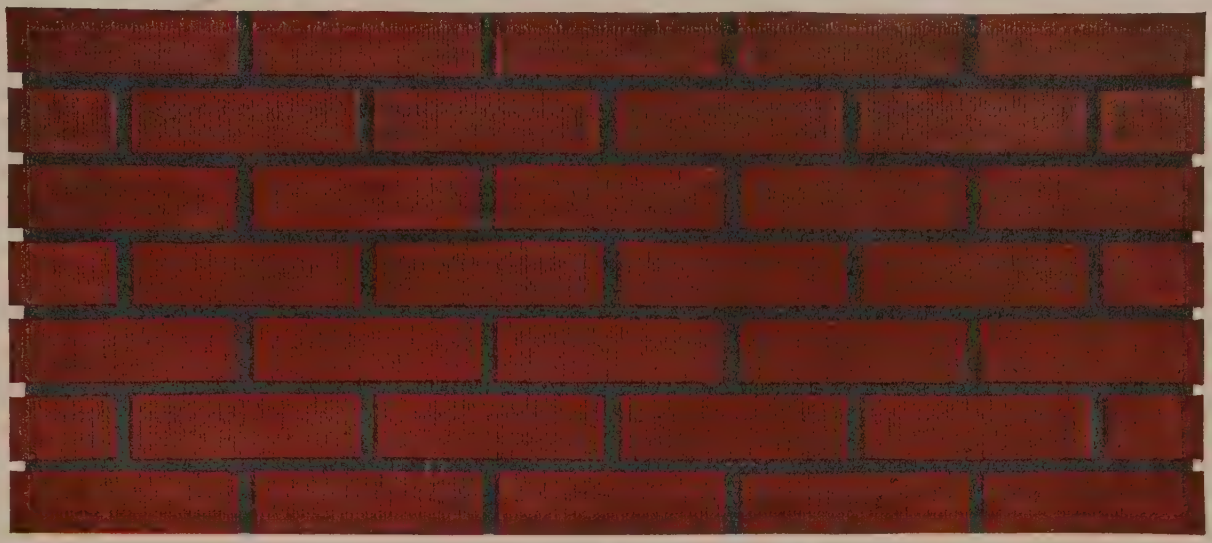
Dayton Biltmore Hotel, Dayton, O.
Marshall-Field Model Apts., Chicago
The Barbizon, New York
Gramercy Park Building, New York
Alden Park Manor, Philadelphia
Home for Aged, Syracuse, N. Y.
New York Central Station, Youngstown, Ohio
Hotel Roosevelt, Pittsburgh
Hotel Allerton, Cleveland
Morrel Street Power House, Detroit
The Cloisters, Chicago
Mineola School, Mineola, L. I.
Firestone-Apsley Building, Hudson, Mass.
Pharmacy College, Albany
Broadway Junior High, Toledo
Eagles' Temple, Canton, Ohio
McKelvey Residence, Youngstown, Ohio
Case School, Cleveland
State Armory, Chillicothe, Ohio
Puritan Telephone Building, Detroit
Spicer and Rankin Schools, Akron, Ohio
Newport High School, Newport, Ky.
Unitarian Church, Youngstown, Ohio
Ypsi-Ann Office Building, Ann Arbor, Mich.
Teaneck High School, Teaneck, N. J.
Hinchman Residence (Smith, Hinchman & Grylls), Detroit, Mich.

SHADE NO. 30-F | SHADE NO. 40-F | SHADE NO. 50-F | SHADE NO. 60-F | SHADE NO. 70-F | SHADE NO. 80-F

Before Building, Write for Free Samples Stating Which Type and Color Interests You

THE METROPOLITAN PAVING BRICK CO., Canton, Ohio

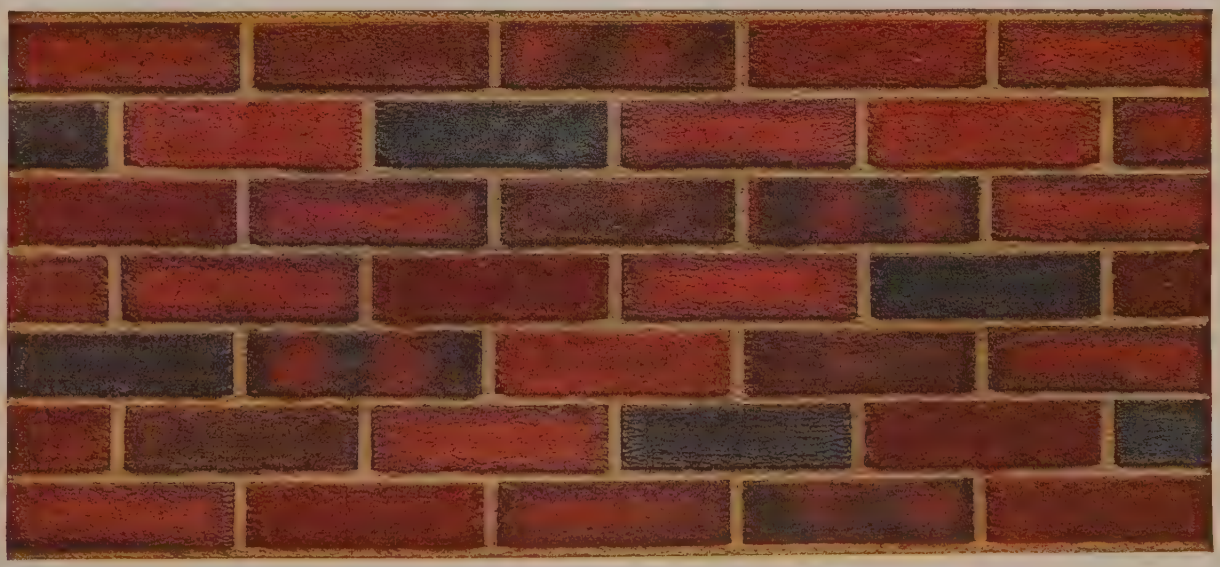
SEE SWEETS CATALOG FOR ADDITIONAL COLOR PANELS



"METRO VER-TEX" Shade 40F

This is the most popular brick for the modern and permanent home. The red in this brick cannot be equalled. This shade is distinctive and must be seen to be appreciated.

Face Brick *by* Metropolitan Sold in All Principal Cities



FULL RANGE "METRO MAT-TEX," Shades Nos. 130-F to 180-F

We guarantee to ship any shade, percentage or mixture selected from the above, to produce any architectural effects. Percentages can be varied, shades eliminated, at your discretion.

THE METROPOLITAN PAVING BRICK CO., Canton, Ohio

CONCO CLAY PRODUCTS

Sales Offices
CHICAGO
INDIANAPOLIS
DUBUQUE

H. D. CONKEY & COMPANY
MENDOTA, ILL.

Brick Plant
DANVILLE, ILL.

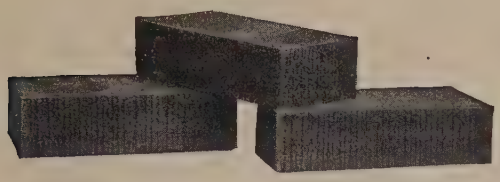
Tile Plant
ST. ANNE, ILL.

Products

This company, with associate companies at Danville and St. Anne, Ill., produces Face Brick, Common Brick, Drain Tile and Hollow Tile. Also Mortar Colors. Send for literature giving full particulars of our various products.

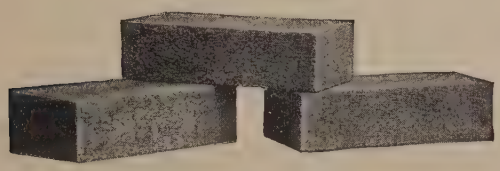
Write for Description of Shades or Samples

We will be glad to send building contractors on request a complete list of our various brick, giving names, numbers and color ranges.



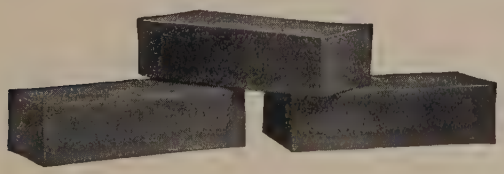
TUXEDOS Rough Vertical Texture

Burned from the purest deep vein Danville Shale. A brick perfect in form and with a beautiful range of colors. Five shades in Flat Set Brick, ranging from a rich, dark brown to light chocolate. Five shades in Edge Set Brick, ranging from clear red to dark red, with flashed edge.



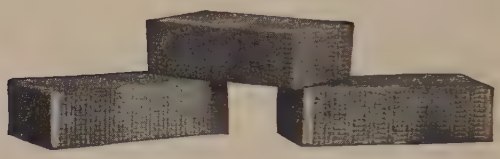
PATRICIANS Matte Texture

A medium, rough textured brick. Every brick a perfect brick. Warm in tone and blend well, making a most attractive wall. Three shades in Flat Set Brick, ranging from dark brown to medium and light chocolate. Three shades in Edge Set Brick, ranging from clear red to red center with dark border.



COMMUNITIES Sanded Smooth

A beautiful, smooth brick made of pure Danville Shale and burned to deep, rich colors. No. 10—hard burned—dark chocolate or red center with black or brown border. No. 20—medium red shading to darker red. No. 30—clear red, with only slight variations in color.

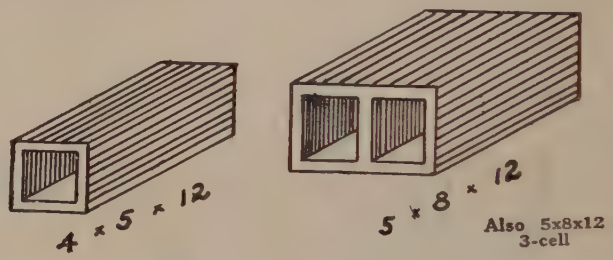


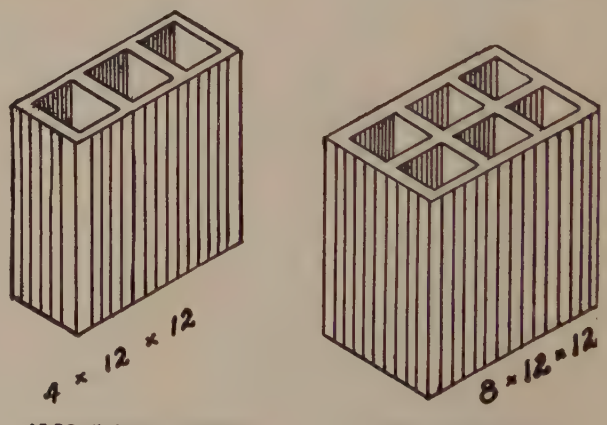
DANVILLE PEACOCKS

If you want something striking in the way of color effect—Danville Peacocks—a charming blend of greens and reds. Rough texture. Uniform size. Every brick a perfect brick.

Hollow Tile

We make a full line of Hollow Tile—partition tile, floor tile and back-up tile in all standard sizes—some of the sizes illustrated below.





ALSO 5x12x12 3x12x12 and 6x12x12

ALSO 10x12x12 and 12x12x12

1½" and 2" SPLIT FURRING

Drain Tile

We also manufacture Drain Tile. Write for full information on any of our products in which you may be interested.

H. D. CONKEY & COMPANY, Mendota, Ill.

Color is the life of brickwork

The present-day tendency is to deviate from the conventional. Color has stepped to the fore and plays a most important role in merchandising of all kinds. And the builder, the architect, the buyer all demand color and character in brick as never before.

The dealer must have variety. He must have the dignified, stately grays, the buff tones, the tans, the rich oxblood reds, dusky purples, browns, gun-metals, moss greens and multi-colors.

Our line of face brick comprises forty-six varieties—six of which are shown on this sheet. These six panels are exact reproductions of display panels we furnish our dealers. These brick are made at two factories at Alliance, Ohio, and one at Darlington, Pa.

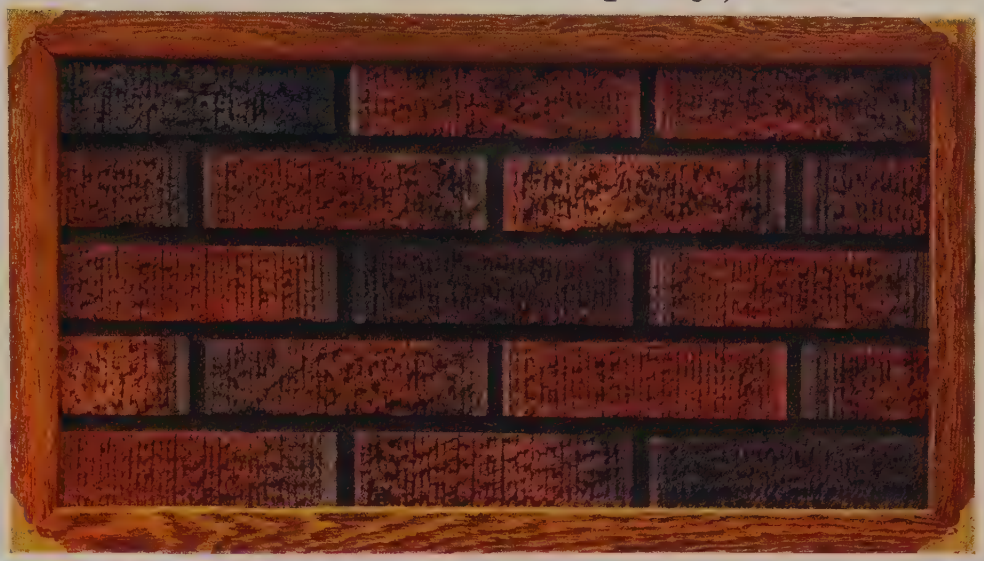
We seek new dealer connections in all unoccupied territory.

If interested, please write for samples, prices, etc.

The ALLIANCE BRICK COMPANY
ALLIANCE, OHIO

Dealers can sell direct from these panels and will have no difficulty with deliveries. Shipments are like the brick shown in these illustrations.

The Alliance Brick Company, Alliance, Ohio

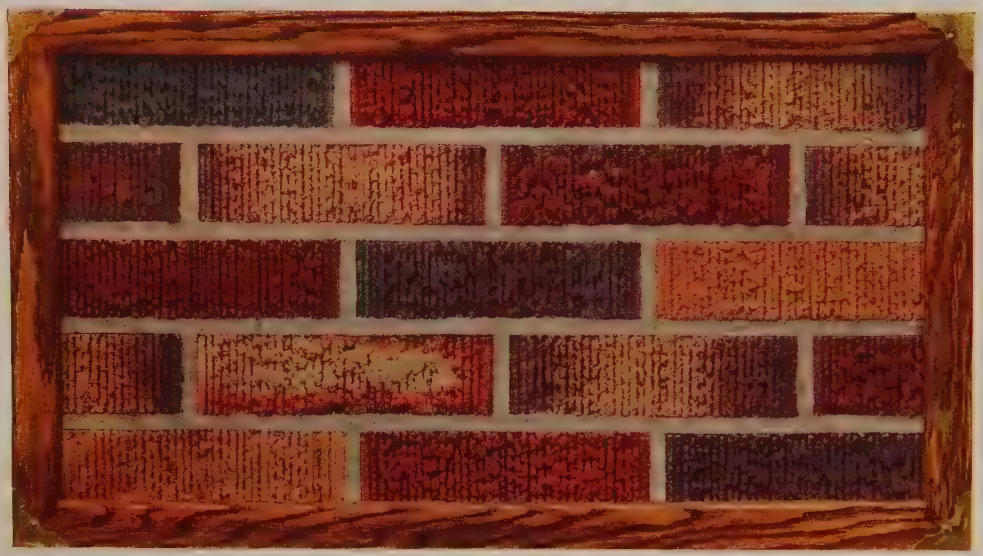


Alliance Multi-Color Ruff Face Brick No. 76 excel all other brick as to beauty and harmony of blend and coloring. The chromatic scale of color runs through their beautiful rough-texture faces, most of the brick showing on their faces three or four or more of the primary colors or their shades. They bring the joy of color to a home.

Alliance Vertical Texture Mingle-Shade Sunkists No. 256 are remarkable for their pleasing variation of colorful brick faces. They are mechanically sharp and clearcut. These are the brick that make homes of lasting charm—beauty that is burned in and defies time, mellowing with the years—a joy forever.

Darlington Ruff-Texture Grays No. 35 are a beautiful soft gray, manganese-spotted brick. Their light gray color and serrated texture give them the appearance of cut stone. In addition to gray, these brick are also produced in flashed browns and golden browns. Wonderful brick for the builder—suitable for the stately mansion or modest cottage.

The Alliance Brick Company, Alliance, Ohio



Alliance Golden Blend Ruffs No. 100, combine beauty of texture with widest range of harmony in color tones. With these brick,—multi-colored, vari-hued—the architect can bring to his structure all the glories of dawn and sunset. Their colors are permanent, everlasting, and bring to a wall a beauty that compels and charms the eye.

Alliance Vertical Texture Sunkist Ruffs No. 255, with their quiet, even, restful shade of auburn tan, modest but beautiful, are greatly appreciated by the most cultured critics. This brick appeals to home lovers by its quiet distinction, its correct appearance and its unobtrusive manifestation of character.

Darlington Smooth Grays No. 26 are the type for monumental structures. They personify character. They are made of the highest grade of Pennsylvania clay. These brick are a warm, light, whitish gray—thoroughly vitrified, mechanically perfect, permanent in color and character. Leading architects everywhere specify them.

To the Face Brick Dealer

Eastern Ohio and Western Pennsylvania produce nearly half of all the face brick made in the United States. Our three factories are centrally located in this wonderful territory, noted everywhere for the high character of its clay products.

We market all our brick through accredited, reputable dealers. And it is to you, as one of these, that we come asking your cooperation in marketing our product. Kindly consider the advantages of a connection, shipping from the heart of America's best clay territory, with a manufacturing capacity of over 200,000 brick per day.

Look over the six specimen panels presented herewith—two from each of our three plants, located at Alliance, Ohio, and Darlington, Pa.

The ALLIANCE BRICK COMPANY
ALLIANCE, OHIO

All brick are marketed through dealer connections. We want live dealers in all unoccupied territory.

WESTERN BRICK COMPANY

Manufacturers of

Face Brick, Common Brick,
Haydite and Featherweight Blocks

GENERAL SALES OFFICE
1604 Builders Building, CHICAGO, ILL.

OFFICE AND FACTORIES
DANVILLE, ILL.

BRANCH SALES OFFICES
INDIANAPOLIS, IND., 804 Hume-Mansur Building — FT. WAYNE, IND. — GRAND RAPIDS, MICH.

REPRESENTATIVES IN ALL PRINCIPAL CITIES OF THE MIDDLE WEST

Facilities

The WESTERN BRICK COMPANY manufactures annually 135,000,000 brick and tile at its two plants.

The shale and clay supply for these factories is practically inexhaustible; fuel supply is owned by the company in sufficient quantities to last at least twenty-five years.

Shipping facilities are unequaled, as the product is distributed from Danville over seven railroads. Plants have side track room for about 75 cars, and ordinary daily shipments, during the building season, exceed 500,000.

Over 1,700,000,000 brick have been manufactured and marketed during the past twenty-seven years.

TRADE-MARK

Western Haydite

Haydite, the material from which the Government's concrete ships were made during the war, is a lightweight, burned clay aggregate, specially manufactured for use in concrete and cement products in place of sand, gravel or crushed rock.

"Western Haydite" weighs less than 1,500 lb. per cu. yd. and the finished concrete, therefore, will average from 30 to 40% lighter than that made from regular aggregates.

It is burned in clinker form, then crushed and screened, which gives absolute control of the sizing, as well as producing particles of exceeding sharpness; therefore, it makes concrete of great compressive and tensile strength.

This aggregate has so many advantages that it is impossible to describe them fully in this one page. Special literature is available, free, upon request.

Western Featherweight Concrete Building Blocks

All of the Western Building Blocks are manufactured from Haydite lightweight aggregate.

In addition to withstanding every test required, no matter how exacting, these blocks in 8x8x16-in. size weigh less than 30 lbs. and nails can be driven into them with the assurance that they will not work loose.

WESTERN STANDARD FACING BRICK

Colors	Stipple V		Doric stippled	Stipple X		Gothic stippled	Matte matte	Cloister smooth	Ivory smooth	Bronze smooth	Empire scratched and rolled
	Plant No. 3	Plant No. 1	Plant No. 3	Plant No. 1	Plant No. 3	Plant No. 1	Plant No. 3	Plant No. 1	Plant No. 3	Plant No. 3	Plant No. 1
Black to brown	861		871	271	811	71	841	410			Persian matte
Brown	862	622	872	272	812	72	842	422		1102	Plant No. 1
Brown to tan	863		873		813		843		1073	1104	
Tan	864		874		814		844		1074		Colonial distorted
Purplish brown				273		73					
Reddish brown		624		274		74					Plant No. 1
Green brown										1103	
Brown edge, red center				230		30		423			Sold in mingled shades of brown to red but percentages can be varied
Dark wine red		640						440			
Red		650						450			
Light red		655		235		35					
Very light red		656		236		36		460			
Tan to golden buff	866		876		816		846		1076		
Golden buff	867		877		817		847		1077		
Pinkish buff	868		878		818		848		1078		
Pink	869		879		819		849		1079		
Pearl gray									1016		
Mellow old ivory									1017		
Light ivory									1018		

Standard Blends: Doric Chicago; Dark Gothic Stipple X; Stipple V; Stipple X Chicago; Stipple V Chicago; Dark Empire; Full Range Empire; Dark Persian; Full Range Persian; Dark Cloister; Red Cloister; Mossaic; Mossblende; October Blend; Burgundy Blend; Amethyst Blend; Western "Handmades."

WESTERN BRICK COMPANY, Danville, Illinois

FIRE CLAY RISTOKRAT FACE BRICK

TRADE MARK REG. U.S. PAT. OFF.

Made by MID-WEST BRICK COMPANY

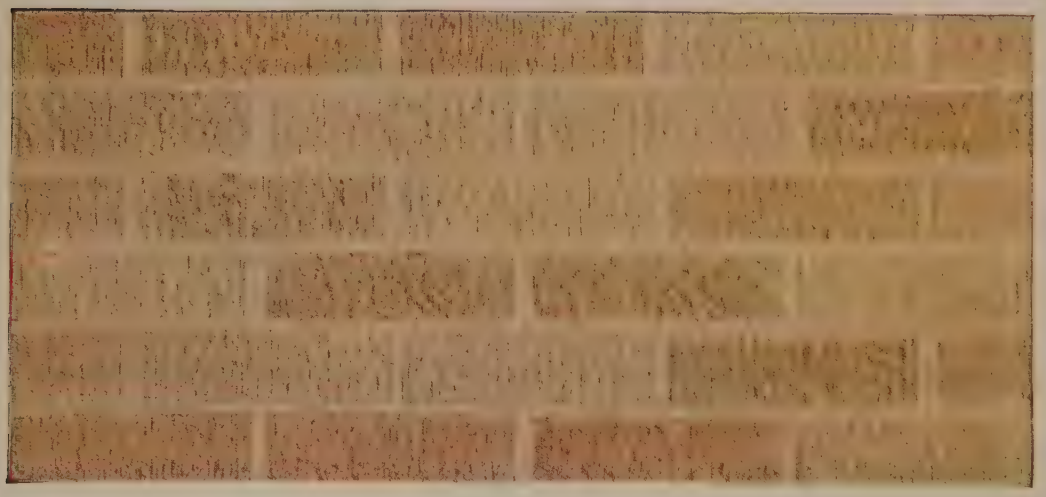
OTTAWA, ILLINOIS

SHADE 600

From no other Middle Western source may these soft warm grays be obtained. They insure a home of beauty, that is distinctive, exclusive and in the best taste. The full range, or a light or dark range, is available. The same shades are offered in smooth or matt texture brick. Natural mortar with a flush joint is shown.

SHADE 750

The use of only the purest fireclay produces the rich shades making up this blend. The colors are everlasting because they are burned into the brick. Rich browns, tangerines, fawns and pinks satisfy the vogue for color that is being followed among the better architects and builders. Natural mortar with tooled joint is employed in this panel.



SHADE 700

In the soft shades of buff this is one of our most popular numbers. It is created by the careful blending of cream, fawn and yellow rugs. The inclusion of the distinctive yellow rug gives character and individuality of tone to the wall. As shown it is laid in a flushed joint with buff mortar.

For Further Details and Literature, Write to: **MID-WEST BRICK COMPANY, Ottawa, Illinois**

The Ristokrat line of light colored face brick is produced in the heart of the Middle West. It offers the popular shades of light colored face brick that meet the modern trend to color in home building now followed by a majority of the better architects and builders. The beautiful face brick shown on these two pages are available on a low freight rate and overnight service to almost every point in the Middle West.

RISTOKRAT
TRADE MARK REG. U.S. PAT. OFF.

Soft warm grays, luxurious pinks, royal browns, beautiful yellows, buffs, fawns, creams and other popular numbers in even or multi-toned shades are available in the Ristokrat line. Practically all such shades were heretofore procurable, for Middle Western building, only from so far distant as Pennsylvania and Ohio. The specification of Ristokrat face brick is a guarantee of the best in brickwork at a minimum cost, because of the proximity of the plant to its market.

SHADE 1000

The most distinguished member of the Ristokrat line is offered in this unsurpassed blend. The harmonious blending of selected grays, fawns, pinks, tans, yellows, browns and tangerines offers a mixture well in keeping with the uses of color in architecture. As shown the brick are laid in natural mortar with a flush joint.

SHADE 755

Careful selection of the most delicate shades of pink and fawn buff is employed to create this beautiful blend. It offers an effect that may not be duplicated with any other face brick. It is shown laid in an ivory mortar. It is equally as pleasing in a natural or buff mortar.

SHADE 720

The yellow rug is an outstanding member of the Ristokrat line—consequently exceedingly popular, because it is not, "just like the house across the street." It is individual and, with either a natural mortar as shown, or in a dark mortar, lays up into a beautiful wall of face brick. It is served in an even shade.

For Further Details and Literature, Write to: **MID-WEST BRICK COMPANY, Ottawa, Illinois**

NATCO STRUCTURAL CLAY TILE

Manufactured by NATIONAL FIRE PROOFING COMPANY

General Offices: Fulton Building, Pittsburgh, Pa.

BRANCH OFFICES

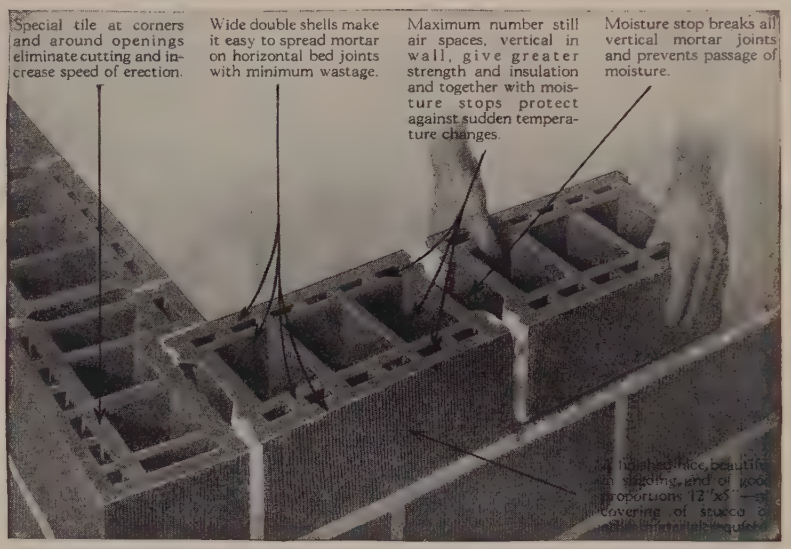
NEW YORK	CHICAGO	PHILADELPHIA	BOSTON
Flatiron Bldg.	Builders Bldg.	Land Title Bldg.	Textile Bldg.

Products

The Complete Natco Line of Structural Clay Tile provides units for homes, garages, factory and industrial buildings of all kinds. Fire safety, permanence, insulation quality, and all the other well-known advantages of masonry construction are economically obtained with Natco. Each piece of tile is stamped with the name "Natco," a guarantee of quality, and an assurance of permanent satisfaction.

Why Build With Natco?

As an aid in reaching a decision as to the type of construction to be adopted, comparative cost figures have been accurately worked out on two identical houses, one of frame construction, the other of tile. Specific figures cannot, of course, be given for every locality, on account of the varying labor and material costs encountered; only a local contractor can furnish these. Relatively, however, the differences will be about as quoted, and the figures will be a helpful basis for comparison.


Special tile at corners and around openings eliminate cutting and increase speed of erection.
Wide double shells make it easy to spread mortar on horizontal bed joints with minimum wastage.
Maximum number still air spaces, vertical in wall, give greater strength and insulation and together with moisture stops protect against sudden temperature changes.
Moisture stop breaks all vertical mortar joints and prevents passage of moisture.

View of corner of Natco Glazed Double Shell Tile showing advantages of double shell construction. These exclusive features are your insurance that any building you construct of Natco Double Shell Tile will be reasonable in first cost, firesafe, with no chance for heat, cold and moisture to pass through the walls.

First Cost. In the typical case, first cost on frame construction was $6,000. On Natco Tile, $6,300. A little more —but this is first cost only, soon compensated for by the other savings.

Heating. Almost all of the Natco wall units have the exclusive "Double Shell" construction, which provides built-in insulation. The home is surrounded by a multiple blanket of dead air, which bars cold. In general, about ten per cent less fuel is required in homes built of Natco Tile. (Naturally enough, this insulating feature also operates to keep homes cooler in summer. A moisture stop in every joint bars moisture.)

Insurance. Natco Tile is made of special clay, moulded to shape, and then burned in great kilns at a temperature of over 2000 degrees. It is absolutely non-inflammable, and so effective a fire-proofing medium that hundreds of the great sky-scrapers of the country are fire-proofed with it. This feature has of course a great effect on the insurance rates. On the two homes, with $2500 contents, the insurance on the Natco house was approximately 65% of that on the frame house.

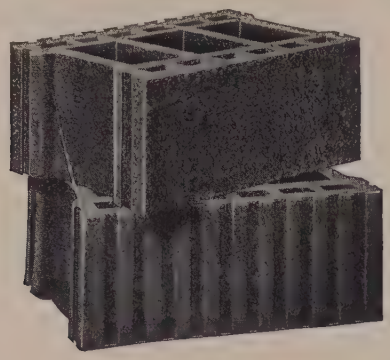
Maintenance. Natco Hollow Tile is unaffected by rain, sleet, sun, and cold, is immune to all the attacks of the elements. Natco Hollow Tile for backing up brick serves, dependable and unaltered, year after year. Natco construction invariably has a very low maintenance cost; usually about ½% a year. Frame maintenance generally amounts to about 2% a year.

Long-Time Cost. When you build a home, you usually expect to live in it for a long time to come. The things you are interested in are its comfort, convenience —and long-time cost. In the typical case the total cost over a ten-year period is $9,208.64 for the frame construction, $7,240.32 for Natco. And the worth at the end of that time, with depreciation charged off, is $4,200 for the frame, $5,985 for the Natco Tile home.

General Satisfaction. In a Home of Natco Tile, the user has beauty that makes it a constant source of pride and satisfaction. Economy, with no sacrifice of quality. Protection from heat, cold, dampness, and fire. Permanence that shields and shelters in years to come, just as it does today.

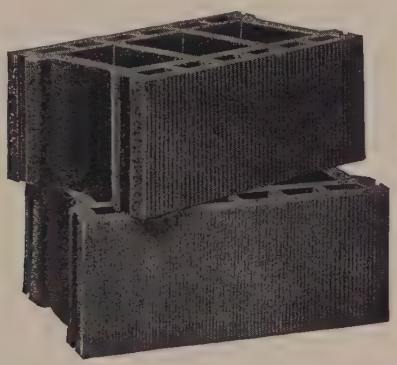
Units for Finished-Face Walls. Natco Finished-face units lay up quickly and economically into a strong, load-bearing, insulated, moisture-stopping wall, attractive in appearance, and permanent. Reasonable in first cost, low in upkeep, resistive to fire and decay.

NATIONAL FIRE PROOFING COMPANY, Fulton Bldg., Pittsburgh, Pa.



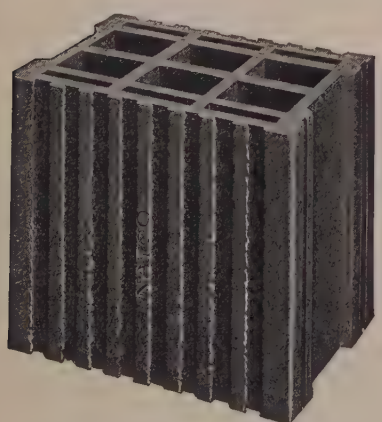
Natco Tex-Tile

Natco Tex-Tile. This is a Structural Clay Tile, with a texture face as beautiful as the finest tapestry brick. A range of charming shades, from rich reds to deep browns are furnished. Extremely effective and harmonious contrasts can be obtained by using white, cream, black or other colors of mortar joints. Wall units have a face 5 x 12 inches, and are 8 inches deep. Proper units are furnished for lintels, sills, and so on. Inside surface is scored for the direct application of plastering.



Natco Combed-Face Tile

Natco Combed-Face Tile. Similar in general to the Tex-Tile, but a smaller color range. Both faces marked by vertical scorings. Furnished in either 6" or 8" thickness, with proper units for lintels, sills, and so on.



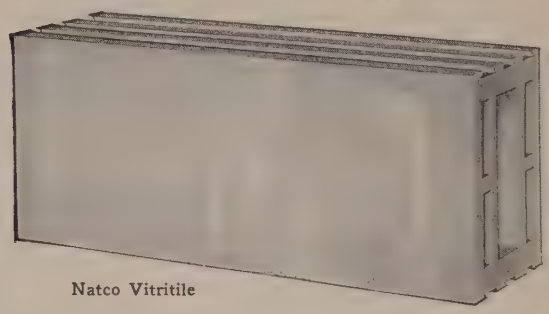
Natco Double Shell Load Bearing Tile

Units for Stucco Walls. Natco Double Shell Load Bearing Tile provides a base which will not warp, rust, rot, or disintegrate, and to which stucco holds permanently. The standard wall units have 12 x 12 inch faces, each scored to receive the plaster on one side, the stucco on the other. Various widths are available for different thicknesses of walls.

Units for Brick Faced Walls. Natco Header-Backer is recognized by the entire building field as the ideal backing for brick, stone, and similar facing material. It provides a fire-safe, insulated, moisture-stopping wall with pronounced savings in mortar, labor, dead weight and time over solid masonry construction. The Brick work is not a mere veneer, but is **bonded** every six courses into the beader unit, making the facing and backing integral.

Natco Header Backer

Natco Unibacker is a Universal Unit. Provides a mechanical bond every six courses, so intimate that the tile and facing work in unison to carry the load. Each unit replaces (according to the thickness of wall) from eight to twelve brick, effecting a worthwhile saving in dead load, decreasing costs, and speeding up the setting.



Natco Vitritile

Units for Interior Walls. Natco Vitritile is the most attractive, practical and advantageous material yet devised for finished face walls in basements, laundries, lavatories, and similar places. The combination of shade ranges furnished which range from light cream buffs to a rich brown, are harmonious and pleasing. The glazed surface never needs painting or plastering, is unaffected by dirt, grease or chemicals, and can easily be kept in a clean and sanitary condition. Natco Vitritile is a structural unit, for use in both exterior and interior load-bearing and non-structural walls and partitions. It is furnished in a multiplicity of shapes and sizes, with one or both faces glazed, and kerfed or split for furring.

Engineering Service. Our Engineering Department is at your service to prepare estimates from your plans or sketches of all the Natco Hollow Tile that will be required in any type of home you desire to erect. In addition notations will be made on the plans or sketches showing how and where the tile is to be used for maximum efficiency and economy.

NATIONAL FIRE PROOFING COMPANY, Fulton Bldg., Pittsburgh, Pa.

STRUCTURAL CLAY TILE

Made by Members of the

STRUCTURAL CLAY TILE ASSOCIATION

Headquarters: 1421 Engineering Building

Chicago, Ill.

The Product:

Structural Clay Tile, or hollow building tile, is made of plastic clay which has been shaped and dried and then burned in kilns at an extremely high temperature to a rock-like hardness. Nature made rocks from clay by tremendous pressure and intense heat. By a union of plastic clay and searing flame, man has made a brother to the everlasting rocks—Structural Clay Tile.

It is manufactured in many sizes, shapes, finishes and colors, which adapt the product to an extremely wide range of structural and decorative uses.

Uses:

Structural Clay Tile is used for load-bearing, or supporting walls, for partitions, floors, ceilings, foundations and fire-proofing for steel skeleton construction. Tile with finished facing is used for both exterior and interior exposed walls. It acts as a backing for walls of brick or stucco. As furring, it is a base for plaster.

This versatile building material is employed in practically every kind of construction. It has many industrial uses and has general acceptance for walls, floors, ceilings and fire-proofing of great commercial and public buildings.

Its popularity as a home-building material is already great, and growing rapidly. Face tile homes and garages are attractive, safe, permanent and, at the same time, low in cost. Structural Clay Tile homes, with brick or stucco facing, offer the utmost in fine home construction. Any architectural treatment may be employed, as tile of this kind lends itself perfectly to the execution of whatever style or plan pleases the individual taste.

The popularity of Structural Clay Tile in rural communities is widespread. It is admirably adapted for farm homes, barns, silos, live stock housing, feeding floors and other farm buildings, as well as rural schools, churches and other public and semi-public structures.

Economy:

There are several factors entering into the use of Structural Clay Tile which make it an economical building material. Its lightness and ease of transporting, handling and storing contribute to economy in labor. Its insulation value adds to the comfort of tile-built homes, while its strength, fire-resistance and durability conserve the value of such buildings indefinitely.

Strength:

Hard-burned Structural Clay Tile has strength far in excess of all ordinary requirements. It is stronger than the cementing bond of mortar which holds it together. When a good rich mixture of cement mortar is used, the entire wall has a dependably high load-bearing capacity.

Fire-resistance:

In the making, Structural Clay Tile is subjected to tremendous heat. It is a child of fire and, in consequence, highly fire resistant. Supporting walls, partitions, floors, column coverings and furring of tile supply protection against fire which it is hard to over-estimate. Millions of dollars in buildings, as well as the lives and happiness of countless families, are destroyed by fire every year. The best protection against the dread spectre of flame is fire-proof construction of Structural Clay Tile.

Insulation:

Heat and cold, dampness and noise are effectively checked by Clay Tile construction. Air cells built into the hollow tile units absorb and neutralize heat or cold. A tile-built home is warmer in winter and cooler in summer. The thicker the tile wall, the greater its insulation value.

Structural Clay Tile is burned to a density which makes the absorption of moisture very low. Regardless of rain, sleet or snow, Tile walls remain dry. The health value of such construction is readily appreciated.

Partitions and floors of Clay Tile halt annoying and distracting sounds. A "quiet" home or apartment has a greatly increased comfort-value.

Weight:

Its comparative light weight makes Structural Clay Tile walls much lighter than with other forms of masonry construction. This contributes to economy in both materials and labor. The ease with which tile is laid and the adaptability of its many shapes add to its value as the ideal material for permanent construction.

Permanence:

Structural Clay Tile endures indefinitely. When a Tile wall is built, it is built to stay. There is no maintenance expense, no depreciation of any kind. This consideration alone, aside from those of strength, comfort and safety, make Clay Tile construction economical.

STRUCTURAL CLAY TILE ASS'N., 1421 Engineering Bldg., Chicago, Ill.

ASSOCIATION SERVICE

The Association:

The Structural Clay Tile Association is a cooperative, non-profit organization of Clay Tile manufacturers. Its purpose is to improve the value of the product itself and to disseminate helpful information as to its use.

Research:

The Association is ever working for better methods of manufacture so that the uniformity and quality of Clay Tile will increase constantly. Research to determine the best methods of using Tile and the most economical and satisfactory form for each type of construction is pursued. Tests and experiments of many kinds have been conducted. A vast library of technical and general information has thus been compiled.

Engineering Service:

The Association's staff of engineers is at the disposal of architects, builders and owners for interpreting and applying this information. Problems of all kinds are being solved by this department. Special cases which do not come within the experience of the Association are investigated and solutions found. Engineering counsel relative to Clay Tile is rendered without charge and inquiries are welcomed.

Literature:

Publications on homes, garages, rural buildings of all kinds, as well as commercial, industrial and public structures are available. These contain much helpful information to those contemplating building, or the alteration of present buildings. You are invited to write for this literature.

In addition, the Association supplies plans and specifications for a wide variety of homes and garages. These have been designed by leading architects of the country and embody the best in taste and modern design. A very moderate charge is made for these plans.

Inquiries:

The Structural Clay Tile Association is serving the building field as a whole. It is unbiased and impartial. Inquiries are always welcome. The members of the Association, listed below, will also be glad to send descriptive matter on their respective products or answer questions regarding them.

ASSOCIATION MEMBERS

Adel Clay Products Co. . . . . Adel, Iowa.
Alabama Brick & Tile Co. . . . . Decatur, Alabama.
Alton Brick Co. . . . . Alton, Ill.
American Fire Brick Co. . . . . Spokane, Washington.
Atlas Brick & Clay Company . . . . San Diego, Calif.
P. Bannon Pipe Co. . . . . Louisville, Kentucky.
Bremen Clay Products Co. . . . . Bremen, Indiana.
Clay Products Co., Inc. . . . . Fairhope, Alabama.
Wm. E. Dee Co. . . . . Chicago, Illinois.
Denver Sewer Pipe & Clay Co. . . . . Denver, Colorado.
D'Hanis Brick & Tile Co. . . . . D'Hanis, Texas.
Eugene Clay Products Co. . . . . Eugene, Oregon.
Haviland Clay Works . . . . . Haviland, Ohio.
Heilman Brothers . . . . . Tiffin, Ohio.
Indiana Drain Tile Co. . . . . Brooklyn, Indiana.
Jackson Brick & Hollow Ware Co. . . . . Ewing, Indiana.
Los Angeles Brick Co. . . . . Los Angeles, California.
Malvern Clay Co. . . . . Malvern, Ohio.
Mason City Brick & Tile Co. . . . . Mason City, Iowa.
Metropolitan Paving Brick Co. . . . . Canton, Ohio.
Mission Brick & Tile Co. . . . . Mission, Texas.
National Fire Proofing Co. . . . . Pittsburgh, Pa.
Nelsonville Brick Co. . . . . Nelsonville, Ohio.
A. C. Ochs Brick & Tile Co. . . Springfield, Minnesota.
Ohio Fire Proofing Co. . . . . Columbus, Ohio.
Okabena Brick & Tile Co. . . . . Okabena, Minnesota.
Pennsylvania Fire Proofing Co. . . . . Saint Marys, Pa.
Peoria Brick & Tile Co. . . . . Peoria, Illinois.
Portland Drain Tile Co. . . . . Portland, Indiana.
Rockford Brick & Tile Co. . . . . Rockford, Iowa.
Salem Brick & Tile Co. . . . . Salem, Oregon.
Sheffield Brick & Tile Co. . . . . Sheffield, Iowa.
Sheridan Press Brick & Tile Co. . . . Sheridan, Wyoming.
Springfield Clay Products Co. . . . Springfield, Illinois.
Streator Drain Tile Co. . . . . Streator, Illinois.
Suburban Brick Co. . . . . Moundsville, W. Va.
Valley Clay Products Co. . . . . Brownsville, Texas.
Vigo-American Clay Co. . . . . Terre Haute, Indiana.
West Point Tile Co. . . . . West Point, Mississippi.

STRUCTURAL CLAY TILE ASS'N., 1421 Engineering Bldg., Chicago, Ill.

"MAKES A THERMOS WALL"

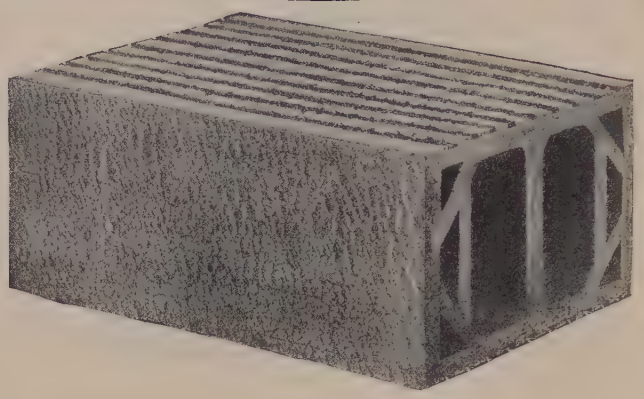
Combines Beauty, Durability and Economy

Read carefully full specifications given below of

HOOSIER HOLO-BRIX

HOOSIER Giant Holo-Brix

WIRE CUT FINISH



Every home owner is interested in a better home for less money possible through using HOOSIER HOLO-BRIX.

The realtor-builder gives a better deal to home-buyers and improves his real estate investment by building better homes for less money through the use of HOOSIER HOLO-BRIX.

Building contractors should be familiar with the use and merit of HOOSIER HOLO-BRIX so as to build for better homes.

See your material dealer for estimates on HOOSIER HOLO-BRIX.

SIZE OF UNIT—5x12 face furnished in 4, 8 or 12" widths for 4, 8, or 12" wall construction. Lays up quickly and saves time and mortar.

CRUSHING STRENGTH—2000 pounds per square inch. Many times greater than required by any building code.

HEAT INSULATION—No insulating material needed when you build with HOOSIER GIANT HOLO-BRIX. The dead air space provides the most efficient heat insulation known. A cool house in the summer and a warm house in winter.

INSURANCE—Lower rates because of fire-resisting construction.

PLASTER BASE—None needed. Plastering is applied directly to the inside face of the wall without requiring furring strips or lath.

SHAPES AND OPENINGS—Special CORNER block is provided which makes a perfect bond on the corner, also Clotures with closed ends to be used in connection with door or casement openings and grooves are provided to receive wood strips in wood frame construction or metal angles in steel frame construction insuring air tight connection. Box Jambs are also finished with recesses to receive box frames. SEE WALL SECTION, LOWER RIGHT HAND CORNER.

JOIST—A 4" block is used covering the ends of the joist. Fill in between the joist with brick or damaged tile and proceed with wall construction.

PAINT—None needed. The rich, beautiful color of HOOSIER GIANT HOLO-BRIX is a strikingly handsome exterior finish. It is absolutely permanent and superior to any paint combination.

COSTS—In residence construction are about the same as good frame construction and approximately 25% less than Face Brick.

SHADES—When HOOSIER HOLO-BRIX are specified our special shading of wire cut finished blocks are furnished which are manufactured in shades of dark or light brown, gray, cream and special mingles, all of which are specified by shade number.

APPEARANCE—Finished wall will have the appearance of a high class tapestry brick with an individuality and a striking effect appealing to the most exacting trade.

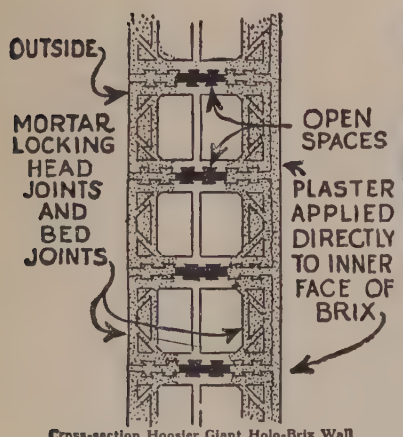
DON'T CONFUSE HOOSIER GIANT HOLO-BRIX WITH THE ORDINARY BUILDING TILE OFFERED ON THE MARKET.

LAYING HOOSIER GIANT HOLO-BRIX—Use a good hard brick mortar, water-proofed. Mortar should be well mixed and tough so that it will stay placed. After the mortar has had a chance to partially set, the outer joints should be tooled.

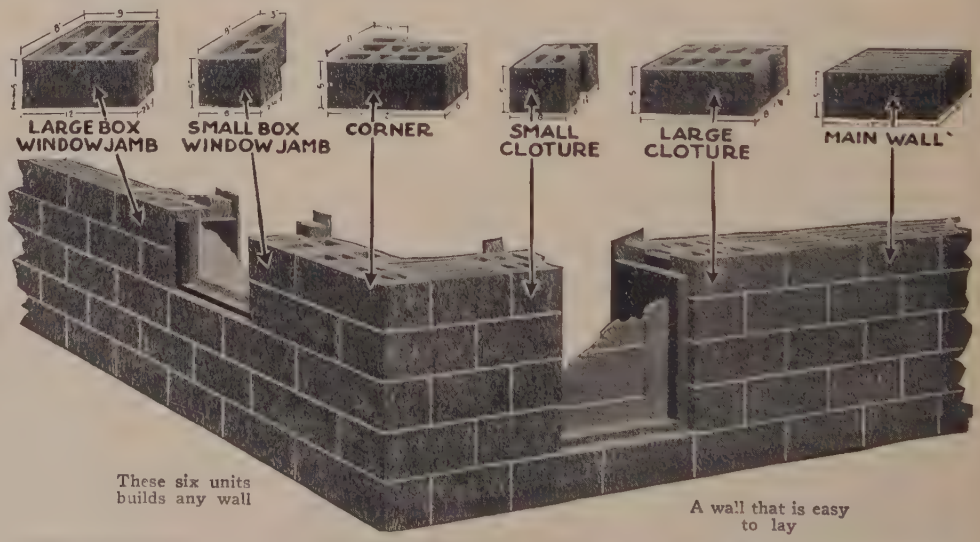
SINGLE UNIT WALL—In laying a single unit wall, spread the mortar on the inner and outer edges of the bed joints, leaving 2" space in the center. Fill and tool head joints and when wall is completed, you will have two independent and firmly constructed walls tied together with the cross webs of the brix forming a continuous dead air chamber in the wall. SEE CROSS SECTION OF WALL, LOWER LEFT HAND CORNER.

TWO UNIT WALL—Use HOOSIER HOLO-BRIX in 5x4x12 for exterior veneer, backing up with the ordinary 4 or 8" back-up tile, depending on the thickness of the wall desired.

Above beautiful home constructed of HOOSIER GIANT HOLO-BRIX



Cross-section Hoosier Giant Holo-Brix Wall



These six units builds any wall

A wall that is easy to lay

HOOSIER BUILDING TILE & SILO CO., Albany, Ind.

Hoosier Glazed-Tile Basements

By Using "Hoosier Glazed-Tile" in Foundation and Basement Walls

"MAKES A STRICTLY-MODERN HOME"

The Ideal Basement Material

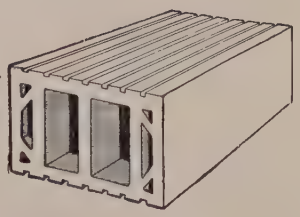
The Hoosier Glazed Building Tile is used as a combined foundation and basement wall. It makes a superior foundation, having many times the supporting strength necessary for its burden. Its glazed surface makes it the ideal basement wall, beautiful and sanitary; beautiful because of its rich, velvety brown surface and sanitary because it holds no dampness and is easy to clean. In reality the use of Hoosier Glazed Building Tile gives you another room, a room as attractive as any in your house.

Size of Blocks

Just right size to look good, having a 5"x12" face and can be furnished in either 4", 8" or 12" widths for various thickness of walls.

Easy to Lay

Use ordinary mortar waterproofed.



Dry Wall

Because Hoosier Glazed Building Tile are hollow and burned to a flint-like hardness. So made and built in a wall that there is no direct connection from outside to inside of wall to draw dampness. Eliminates capillary attraction entirely.

Makes a finished wall at one operation, no forms to build, tile comes ready to lay. All necessary shapes for fitting window frames and corner blocks for making perfect bond.

☛ For prices and estimates see your supply or lumber dealer.

HOOSIER BUILDING TILE & SILO CO., Albany, Ind.

CLINTON METALLIC PAINT COMPANY

Mortar Colors, Cement Colors, Protective Paints and Roofing Cement

100 Clinton Road
CLINTON, N.Y.

NEW YORK OFFICE: 19 Liberty Street. Telephone, John 3369

Products

Manufacturers of CLINTON MORTAR COLORS and CLINTON CEMENT COLORS. Also manufacturers of the following CLINTON Specialties:

Clinton Silk Fibre Elastic Slaters Roof Cement
Clinton Asbestos Furnace and Retort Cement
Metallic and Venetian Roof and Barn Paints
Clinton Hermetic-Seal Liquid Roof Cement
Clinton High Temperature Fire Brick Cement

Send for descriptive literature and prices.

Clinton Mortar Colors
Nature's Permanent Colors—Made Since 1887—at Clinton, N.Y.

Experience

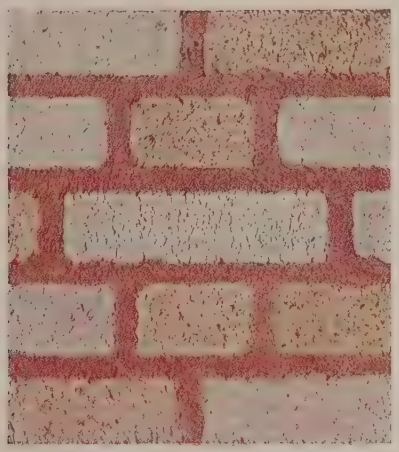
Ever since 1887, the CLINTON METALLIC PAINT COMPANY has served the architectural profession and the building trade. Over 40 years of scientific research and generations of manufacturing experience are reflected in the uniform excellence of Clinton products.

Permanent and Uniform

Clinton Mortar Colors are mineral colors, as permanent as the colors in natural rock. Rigid laboratory tests keep them absolutely uniform from shipment to shipment and from year to year.

Directions for Estimating and Using Clinton Mortar Colors

To get a mortar joint of intense color it is advisable to use approximately 100 lbs. of dry mortar color per



Mortar Colored with Clinton Pompeiian Buff No. 600

Mortar Colored with Clinton Double Strength Olive Green No. 1503

Mortar Colored with Clinton Special Chocolate No. 404

Mortar Colored with Clinton Colonial Buff No. 700

1000 brick laid in running or common bond, with half-inch mortar joints. If mortar joints are wider or narrower, or if a bond requiring more or less mortar per 1000 brick is used, the amount of mortar color required per 1000 brick should be increased or decreased proportionately.

Following are two formulas for mortar of deep intense color:

Cement Mortar

Clinton Mortar Color (dry)	25 lbs.
Portland cement	1 bag (1 cu. ft.)
Sand	3 cu. ft.
Hydrated lime	1/10 sack

The above is sufficient to lay approximately 250 brick in running or common bond with half-inch mortar joints.

Cement Lime Mortar

Clinton Mortar Color (dry)	30 lbs.
Portland cement	1 bucket (16 qts.)
Hydrated lime	1 bucket (16 qts.)
Sand	6 buckets (96 quarts)

The second formula is sufficient to lay approximately 300 brick in running or common bond with half-inch mortar joints.

As it is not always convenient to weigh the color on the job, we tabulate below the various shades of Clinton Mortar Color, showing in separate columns the number of quarts of dry Clinton Mortar Color (*struck measure*) which are equivalent to 25 lbs. and 30 lbs.

Caution: This table applies only to genuine Clinton Mortar Colors.

	Number of quarts Equivalent to 25 lbs.	Equivalent to 30 lbs.
Clinton Hematite Red No. 10	10	12
Clinton Mortar Brown No. 400	8½	10½
Clinton D. S. Chocolate No. 402	9	11
Clinton Special Chocolate No. 404	9	11
Clinton Colonial Buff No. 700	19	23
Clinton Pompeiian Buff No. 600	19	23
Clinton Dark Buff No. 717	16½	20
Clinton Mortar Black No. 900	18½	22½
Clinton D. S. Black No. 800	19	23
Clinton D. S. Olive Green No. 1503	17½	21

Pearl Gray Mortar may be produced by using one-eighth as much Clinton Double Strength Black No. 800 as is recommended above to produce intense black mortar.

Clinton Mortar Black No. 900 or Single Strength Black, as it is sometimes called, will not give a jet black mortar. For best work use Clinton Double Strength Black No. 800.

For cream colored mortar a cement lime mortar or a cement mortar made with white cement and sand should be used, adding about half as much Clinton Colonial Buff No. 700 or Dark Buff No. 717 as recommended above.

Many contractors get good results with smaller proportions of Clinton Mortar Colors than those above recommended. This is possible if coarse sand is used and all ingredients are mixed, remixed, then mixed again. Experience, however, proves that the amounts of color recommended will give good results under all conditions and we cannot assure satisfaction if less color is used. Money spent for a little extra color more than pays for itself, in power and wages saved at the mixer and in the owner's satisfaction with the finished job.

Clinton Pulp Colors

Many users of Mortar Color desire the colors in Pulp form. Clinton Pulp Colors are of the same high quality as Clinton Dry Colors. Further detailed information with prices will be furnished upon request.

Specification

All coloring material to be manufactured by Clinton Metallic Paint Co., Clinton, N.Y., to be delivered on the job in original packages bearing their labels, and to be used according to directions which they will furnish.

Important Notes on the Preparation and Application of Colored Stucco

1. The Portland Cement Association, 33 West Grand Avenue, Chicago, will furnish any builder, without charge, detailed practical information concerning the preparation and application of colored stucco. Their instructions have been followed in the preparation of stucco panels reproduced below. The stucco was made in accordance with the following formula:

White Portland Cement	5 bags (470 lbs.)
Hydrated Lime	1 bag (50 lbs.)
Marble Dust	16 cu. ft.
Color	A weight equal to percentage of weight of cement indicated in table and under panels.

Any suitable white sand may be used in place of marble dust.

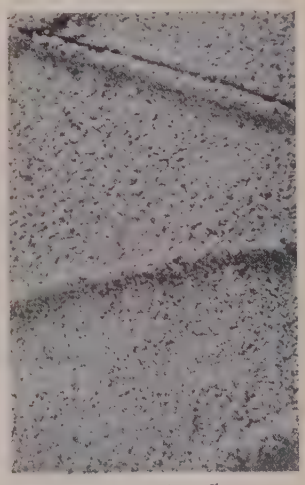
Shade	Clinton Color to be Used	Percentage of Color
Pink	Clinton Hematite Red No. 10	5 %
Pink	Clinton Red No. 82	1 %
Orange Pink	Clinton Red No. 61	1 %
Brown	Clinton Brown No. 1150	1.5 %
Deep Cream	Clinton Dark Buff No. 717	5 %
Cream	Clinton Colonial Buff No. 700	5 %
Light Yellow	Clinton Yellow No. 714	.75%
Light Green	Clinton Green No. 1502	1 %
Light Blue	Clinton Blue No. 1601	1 %

2. Any careful mechanic who will follow directions can prepare and apply colored stucco in a satisfactory manner.

3. Colored stucco appears much deeper in shade when wet than when dry. The change in color due to drying out of the stucco surface during the first few days after application must not be mistaken for fading. If Clinton Colors are used as suggested in our folder the final result should be closely similar to panels shown. Variations of fineness or color of the sand will account for such slight differences in color tone as may be noted. It is well to make up a small experimental batch, apply it, and let it dry out before proceeding with the work, thus proving that the color effect is satisfactory.

4. Write for our folder, "Color in Stucco," showing samples and giving more detailed information.

Background—No. 1502 Green 3%
Foreground—No. 61 Red 1%



No. 1601 Blue 2%

Anchor Brand Cement and Mortar Colors

Manufactured by C. K. WILLIAMS & CO.

Main Plant, EASTON, PA.

RAW MATERIAL AND SUPPLY PLANTS

ALLENTOWN, PA.
GRANITE CITY, ILL.
EAST ST. LOUIS, ILL.
LEHIGH GAP, PA.
EMERYVILLE, CAL.
MALAGA, SPAIN
MONROE, LA.
FLEETWOOD, PA.
MARTINS FERRY, OHIO
FRUITLAND, N. Y.
MINERAL POINT, MO.

MINES AND RAW MATERIAL DEPOSITS

ALLENTOWN, PA.
LEHIGH GAP, PA.
EASTON, PA.
MINERAL POINT, MO.
FLEETWOOD, PA.
MONROE, LA.
FRUITLAND, N. Y.
READING, PA.
JAEN, SPAIN
ST. GENEVIEVE, MO.
WYOMISSING, PA.

AGENTS IN ALL PRINCIPAL CITIES

Products

ANCHOR BRAND STUCCO COLORS.
ANCHOR BRAND MORTAR COLORS.
ANCHOR BRAND CEMENT COLORS.

The Charm of Color

Imagine what a drab world this would be if it were not for color! Nature is lavish in her use of color and as a result we have blue sky, green fields, red earth, gray rocks and multi-tinted flowers all blended into a harmonious landscape of which the very soul is—COLOR.

Color in the Home

Inside the home color is used in profusion on the walls, the draperies, the floor coverings, and even on the polychrome ornamentations of the lighting fixtures. But why confine the charm of color to the inside of the home?

Is the appearance of the outside of the house of no importance? We are speaking now of brick houses for in frame houses contrasting colors are always used for the body color and the trim. But when you build for permanence with brick why do you invariably use white mortar?

Just habit, isn't it? You have heard of Mortar Colors, perhaps, but are not familiar with the beautiful effects that can be obtained by their use. Perhaps you think they are difficult to use—or expensive—or not reliable. None of these things are true. Mortar Colors are easy to use, they are inexpensive and if you are careful to select a reliable brand (such as Anchor Brand) they are as permanent and non-fading as the brick themselves.

A Distinctive Home

If there is any one thing that the home-owner desires above another it is a distinctive home. He does not wish his house to look like all the other houses in the neighborhood. He wants a house that is different—one that possesses a personality of its own. Working with brick there is no way in which you can so easily give charm and individuality to the exterior of a home as by using colored mortar.

Profit by Our Experience

The experience of C. K. Williams & Co. with Mortar Colors goes back to 1878—50 years ago. What we have learned in this long period of time is freely at the service of building contractors who wish to know more about Mortar Colors and how to use them to the best advantage. Just drop us a line saying "Send me your literature on Anchor Brand Mortar Colors" and we will gladly respond with interesting and helpful printed matter. After you have learned all you can from this if there are any questions you would like answered let us know what they are and we will gladly reply to all your questions in a personal letter.

Anchor Brand Cement Colors

Anchor Brand Cement Colors are very finely ground and produce clear, bright tones with a minimum of coloring material. They are used in floors, sidewalks, cast stone work, roofing and floor tile, stucco, etc., and should not be confused with mortar colors.

For Cement Floors—Although colored cement floors are comparatively inexpensive, they should never receive the treatment of a cheap floor. Colored cement, if carefully laid, finished and protected, will be found to possess all the decorative qualities of more expensive materials, along with the strength and economy of concrete.

For Stucco—The popularity of colored or tinted stucco surfaces is increasing rapidly. Directions for the use of our stucco colors will be furnished on request.

Available Colors—Our list of colors suitable for cement and stucco work is too long to publish here, but the more important numbers are given below. For special shades or tints we will be glad to supply samples as requested.

No. 500	Red Oxide	No. 17	Dark Buff
No. 1195-B	Red Oxide	No. 1169	Brown
No. 1241	Red Oxide	No. 805	Brown
No. 305	Red Oxide	No. 269	Green
No. 690	Red Oxide	No. 271-S	Green
No. 1149-M	Yellow Oxide	No. 328	Blue
No. 5	French Yellow	No. 249	Black

Directions for Coloring Cement Floors

Subfloors under colored cement topping should be laid as usual, although it is better to use a fairly dry mix and tamp thoroughly. Allow 1 in. for top dressing, which should be laid immediately.

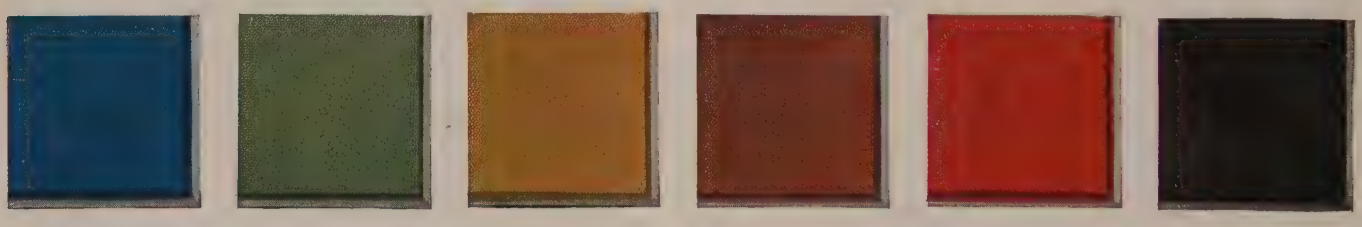
Top Finish—Apply top finish not less than 1 in. thick composed of 1 part cement and 2 parts of sharp clean sand, free from loam, and from 3 to 10 per cent of color, according to results desired. Mix the cement, sand and color thoroughly before water is added. Use only enough water to make a heavy paste. Continue mixing until the mass is absolutely free from spots or streaks of color. While the base is still moist, apply the top dressing as follows: Trowel down about ½ in. of colored cement at a time, so as to work the air out of the mass. Build to the surface in this manner. Use the stroke board to chop the surface, as the mass will be too tough to stroke in the usual way. Take off any surplus with the trowel. Level the surface and let it lie till it becomes dull. Do not trowel until all the water on the surface disappears.

Tile Effect (Optional)—48 hours after application of the top finish, cut the floor ⅛ in. deep with a three-cornered file sharpened to a diamond point, so as to produce a tile effect in the pattern selected.

Note: Cutting floors while green will produce a ragged edge.

As soon as the topping is sufficiently set cover the floor with a 2-in. thickness of sawdust, which should be kept wet for at least 2 weeks.

Cleaning and Waxing—When the protective coating is removed, wash the surface with linseed oil soap, using a wire brush if necessary, to remove dirt and stains. When clean and dry, cover the surface again with a 2-in. thickness of sawdust. Just before the floor is to be put into use, polish it with a suitable floor wax.



BLUE GREEN YELLOW BROWN RED BLACK

Cement Floor Tile Colored with Anchor Brand Cement Colors

C. K. WILLIAMS & CO., Easton, Pa.

Left
Five Range Rough Texture Brick
Laid with Anchor Brand
No. 19 Buff

188 lbs. Sand (2 cu. ft.)
94 lbs. Cement (1 bag)
9½ lbs. Hydrated Lime
15 lbs. No. 19 Buff

Right
Full Range Rough Texture Brick
Laid with Anchor Brand
No. 1151 Red

188 lbs. Sand (2 cu. ft.)
94 lbs. Cement (1 bag)
9½ lbs. Hydrated Lime
20½ lbs. No. 1151 Red

Anchor Brand Mortar Colors

Anchor Brand Colors are manufactured in our own mills to meet the three essential requirements: **permanence of color**, so the mortar will not change its shade with age; **uniformity of color**, so that all batches of mortar in which a given color is used will be exactly alike; and **fineness of grinding**, so that the maximum coloring power is developed.

Colors—The following ten colors are standard:

No. 1151	Red	No. 19	Light Buff
No. 115	Red	No. 220	Single Strength Black
No. 1184	Brown	No. 222	Double Strength Black
No. 17	Dark Buff	No. 1174	Double Strength Chocolate
No. 18	Dark Buff	No. 257	Lime Proof Green

For special work we can supply special colors of any shade desired. Also some very good tints can be obtained by mixing the regular colors. Grays are obtained by using black sparingly, etc.

Sold in Dry Form—It is our experience that colors in the dry form are least expensive to the user and show the greatest coloring power per unit of weight.

Directions for Using Anchor Brand Mortar Colors

Cement Mortar—All mortar for face brick work should be accurately mixed to the formula: 188 lbs. (2 cu. ft.) sand, 94 lbs. (1 bag) cement, 9½ lbs. hydrated lime, with the proper amount of Anchor Brand Mortar Color.

Mixing—Mix thoroughly the dry color, sand, hydrated lime and cement before water is added. After the water is added, continue mixing until the mass is absolutely free from spots or streaks of color. Mortar should be mixed as stiff as is practicable, and batches should be kept as nearly as possible at the same consistency throughout the job. Accurately maintain the same proportions of ingredients in all the batches.

Test Panel—If test or sample panels are desired they should be constructed in the same manner and of the same thickness as the finished wall. Face brick for test panels should be laid in mortar mixed according to the formula and directions given above. After test panels are thoroughly dry, it should be decided whether the color of the mortar is satisfactory, or whether the amount of mortar color in the formula should be increased or reduced.

Cleaning and Pointing—When the plasterer has left building, all surface brick and mortar shall be thoroughly cleaned down by applying a solution containing not more than 1 part of muriatic acid to 20 parts of water, using a stiff brush. Surface shall then be rinsed with clean water. All defective joints should be pointed up at this time.

Notes

Lump Lime—If lump lime is used in place of hydrated lime, it must be thoroughly slaked and allowed to cool at least 24 hours before being brought in contact with mortar colors. *Hot lime bleaches color.*

Accurate Mixing Necessary—Lime is a strong pigment; sand and cement also have an important effect on color. It is important to measure accurately and maintain same proportions throughout the work.

Omission of Test Panel—For smaller jobs where cost is an important consideration, the test panel may be omitted. In this case, a little of the mixed mortar may be taken from the first batch and pressed into a small cake. When this cake is dry, it can be determined whether the color of the mortar will be satisfactory.

Raking Joints—Defer raking till mortar has begun to set.

Prevention of Efflorescence—If mortar is mixed stiff and raking of joints deferred till mortar has begun to set, efflorescence will rarely be found. Efflorescence is in no way caused by Anchor Brand Mortar Color. It is due to the occurrence of soluble salts in cement, sand, lime, water or the brick, and is just as common in plain mortar as in colored mortar, though not so easily visible.

Special Facilities of C. K. Williams & Co.

C. K. Williams & Co. has a highly specialized color manufacturing organization and a plant equipment which consists of 12 plants, and 11 mines and raw material deposit. At Easton, Pa., alone, the company's plant buildings and storage space for raw materials cover more than 75 acres. Production of colors of maximum quality and uniformity has been the company's policy for over 50 years.

Left
Five Range Rough Texture Brick
Laid with Anchor Brand No.
1174 Double Strength
Chocolate

188 lbs. Sand (2 cu. ft.)
94 lbs. Cement (1 bag)
9½ lbs. Hydrated Lime
15 lbs. No. 1174 Double Strength Chocolate Brown

Right
Full Range Rough Texture Brick
Laid with Anchor Brand No.
222 Double Strength Black

188 lbs. Sand (2 cu. ft.)
94 lbs. Cement (1 bag)
9½ lbs. Hydrated Lime
14 lbs. No. 222 Double Strength Black

C. K. WILLIAMS & CO., Easton, Pa.

BLOOMINGTON LIMESTONE COMPANY

BLOOMINGTON, INDIANA

Producers of ASHTONE

PHILADELPHIA · CHICAGO · DETROIT · TORONTO
CINCINNATI · NEW YORK · DALLAS

What ASHTONE Is

ASHTONE is the trade name of the Bloomington Limestone Company's Random Ashlar, which for years has been known to architects and builders as a particularly beautiful, durable material. It consists of carefully selected pieces of Indiana Limestone, sawed to the proper heights and thicknesses for laying. Its use produces a charming and striking effect, as shown in the ASHTONE homes illustrated in this book.

In selling this stone we take the utmost care to select only the most suitable stone and to prepare it carefully at the mill. For this reason we feel that our Random Ashlar is unequalled, and to express our pride in the product we give it a distinctive name by which it may be known everywhere—ASHTONE.

What ASHTONE Means in Residence Construction

Two important factors must be considered when choosing a building material. First, it must have strength; second, it must have beauty. In both respects ASHTONE completely measures up. Quarried from the earth, ASHTONE has solidity and lasting strength. As for beauty—no material ages so gracefully, nor so staunchly defies time.

ASHTONE is suitable, not only for the large home, but also for the small one. Homes of various styles and sizes are shown in this issue, which are proof enough of the adaptability of this stone. Not only does it fit all types of homes architecturally, but its financial range is also great. It must not be imagined that ASHTONE is suitable only for the expensive home—it fits equally well into the budget for a smaller residence.

In short, a home of ASHTONE means greater charm, *higher resale value* and freedom from upkeep expense.

Various Finishes Possible

There are four principal ASHTONE finishes—Colonial, the smoothest; Tapestry, which is a shot-sawed or sand-sawed finish; Split Face, which is produced by splitting the stone, and Rock Face, the coarsest. These finishes can be had in any of the shadings of stone—buff, gray or variegated.

Buff ASHTONE is particularly suitable for homes where a number of trees are found on the building site. The Colonial finish is best for the house of severe lines, as it carries out the simplicity and neatness. If the roof is varied in tone it should be in rich colors, bringing out the shadings in Buff and Variegated ASHTONE. . . .

BLOOMINGTON LIMESTONE COMPANY, Bloomington, Ind.

BLOOMINGTON LIMESTONE COMPANY

BLOOMINGTON, INDIANA

Producers of ASHTONE

PHILADELPHIA CHICAGO DETROIT TORONTO
CINCINNATI NEW YORK DALLAS

For a charming rustic appearance, use the Tapestry Gray. . . . Variegated ASHTONE, in either Colonial or Tapestry finish, gives a rich exterior.

A new stone *found only in the quarries of this company* is called Cirri ASHTONE, which is entirely distinctive, its markings resembling cirrus clouds.

Preparing ASHTONE for Laying

Cut to the necessary thickness and height at the mills, ASHTONE is cut to the desired lengths on the job by the use of a carborundum saw. Using this portable carborundum saw speeds up the work, since the joining and breaking can be done right at the time the stone is needed. One cutter can keep several men busy laying stone. This method is economical for it does not require skilled labor.

We carry a number of these saws, which we will either rent or sell at a moderate sum. Many contractors prefer to buy this saw, as the carborundum blade can be removed and a metal wood saw substituted. The use of this saw eliminates waste stone and precludes careful planning and cutting at the mills.

Our free service man comes to you, equipped with this carborundum saw, to show you how easily, quickly and economically ASHTONE can be laid.

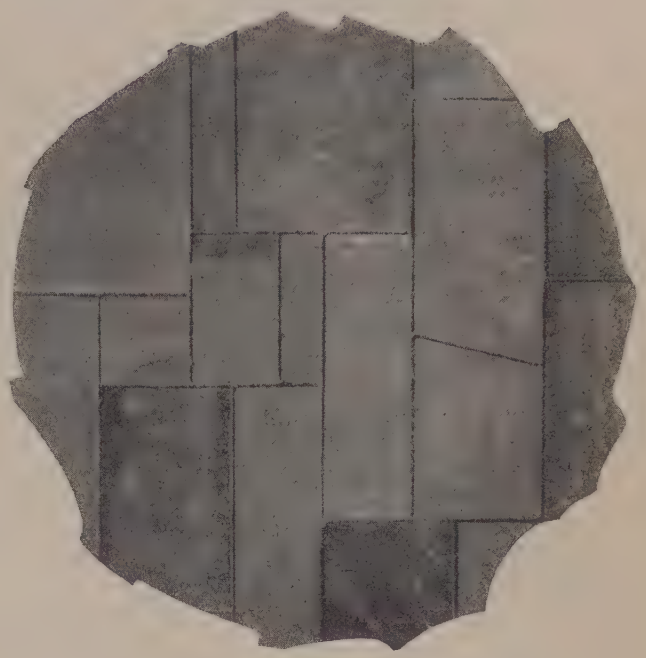
How We Back Up Our Product

We want you to like ASHTONE, therefore we offer you a service never before extended by any limestone company. Whenever and wherever ASHTONE is specified, we will send an expert, *entirely at our own cost,* to show you how to lay the stone to the best advantage. This man, an artist in his line, is working for you for nothing, *making sure that you cannot go wrong.*

This service is of vital importance to you. It means better profits, pleased clients and an added volume of business. When you consider building a stone house you can immediately dismiss all worry as to workmanship by specifying ASHTONE and taking advantage of this unparalleled co-operation.

The Cost of ASHTONE

There has long been a false impression that stone costs much more than other materials. This is far from true. ASHTONE can be used in a home at a cost only slightly higher than that of good face brick. Thus, in a $10,000 house, ASHTONE would cost very little more. And it is conservatively estimated that ASHTONE increases the resale value of the home 10%. Add to this the elimination of upkeep—as against frame, ASHTONE pays for itself in the saving of paint alone. Besides, frequent painting of a home entails the destruction of plants and shrubbery into which have gone much care and expense.



How Ashtone Looks in a Wall

An unusual feature of ASHTONE merchandising is that we group all our stone—buff, gray and variegated—at the same price. Thus you may specify ASHTONE and let your own preference determine your choice of stone.

Send for Our Free Booklet

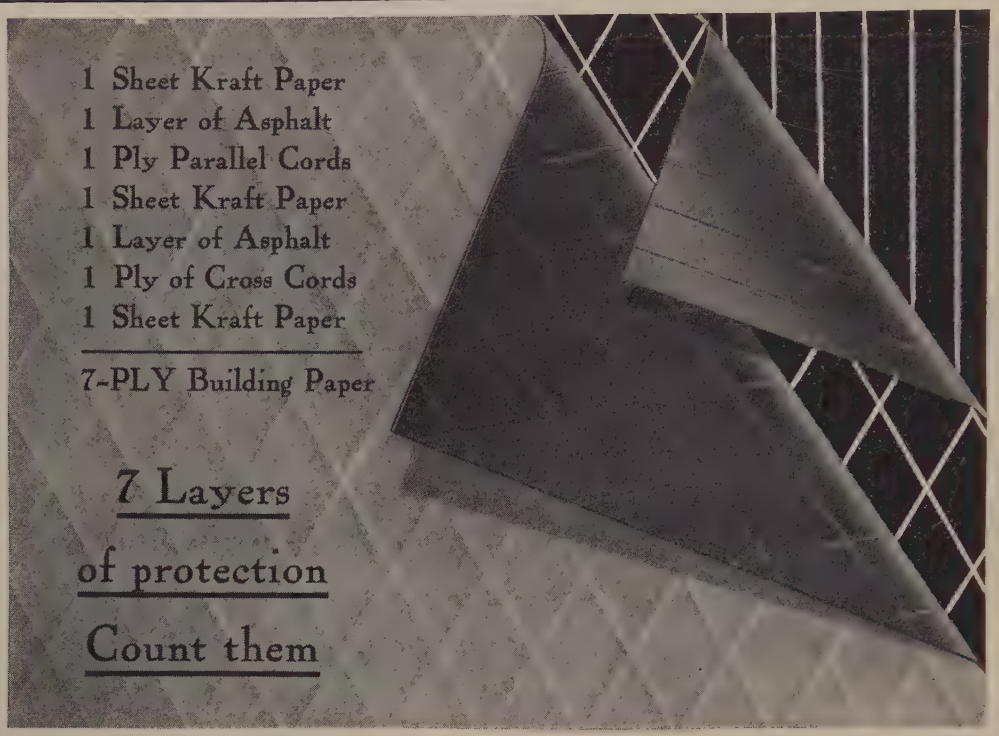
The story of ASHTONE is told in greater detail in our booklet "The Common Sense of ASHTONE." This is for free distribution, and we will gladly send you a copy upon request. Write!

BLOOMINGTON LIMESTONE COMPANY, Bloomington, Ind.

7-PLY Building Paper

Made by SAFEPACK MILLS, Inc.

MILLIS, MASSACHUSETTS



PRODUCTS—Complete line of Waterproof Building Papers, 7-PLY, Ebony Kraft, Black Insulating Paper, Redplex, Kraftex Triplesheath, Sheathtite Asphalt Roof Coatings and Cements.

Safekote
more than waterproof

COMPLETE LINE OF ROOFING PRODUCTS—Slate Surfaced Strip and Individual Shingles. Slate and Smooth Surface Asphalt Roll Roofings. Safedex Canvas Porch and Deck Covering.

7-PLY Building Paper

This extremely strong, tough, reinforced building paper is being consistently used by Architects, Engineers, Contractors, and Builders, for its remarkable protective and insulating qualities.

The outstanding feature of 7-PLY is the three separate sheets of strong Kraft paper, asphalt-coated on four surfaces. The centre sheet, asphalt-coated on both sides, can never rot or dry out, thus insuring a lifetime of service.

7-PLY is 50% to 100% heavier, thicker, and more efficient than any single sheet, duplex-paper, or two-paper-reenforced combination, which disintegrates in comparatively few years.

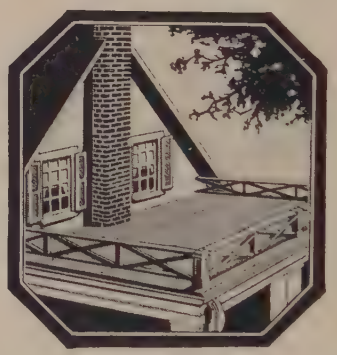
7-PLY is Everlasting, Impenetrable—Waterproof, Weatherproof, Dampproof, Stormproof, Windproof, Smokeproof—Airtight. Protects as long as the building lasts.

7-PLY will not tear in the wind or through rough handling. It is clean to handle, the protective asphalt being inside, out of sight and touch. It handles easily on the job; is not brittle, will bend or crease without cracking and not lose its waterproofing quality thereby.

7-PLY is used under clapboards, stucco, brick veneer, shingles and roofing; between studs in back plastering; under flooring to keep out dust, sub-floor dampness, and to prevent buckling. Also used for temporary sheathing in building and construction work; outdoor covering for building materials; protective covering for cement work and trenches.

7-PLY costs no more than ordinary good building papers.

Put up in Standard rolls, 36 inches wide, containing 500 sq. ft.
Half rolls, 36 inches wide, containing 250 sq. ft. To order: 40, 48, 54, and 60 inches wide.



SAFEDEX
Canvas Porch and Deck Covering

SAFEDEX is the ideal roofing material for all flat or slightly sloping porch roofs, and floors. It consists of a fine quality of canvas and a standard grade of "Safekote" Roll Roofing, cemented together with pure asphalt, making a roof or floor covering of exceptionally high protective value.

Safedex is pliable, tough and long wearing. It is laid canvas side up. It will not bulge or creep, and when painted any desired color it forms an attractive, practical covering of far greater protective value than ordinary canvas, tin or other material.

Put up in Rolls 36 inches wide, containing 108 sq. ft.

Yes—Your samples, descriptive folders and prices are ready for you. Write for them NOW

SAFEPACK MILLS, Inc., Millis, Massachusetts

BIRD'S ROOFS

Neponset Building Papers and Wall Board

Chicago Office and Plant
1472 West 76th Street

Manufactured by BIRD & SON, inc.

Established 1795

New York Office
295 Fifth Avenue

Mills and General Offices, East Walpole, Mass.

Canada, Building Products, Ltd., Bird & Son Division, Ham lton, Ontario

Products

Bird's Twin Shingles (Neponset, American, Hexagonal), Bird's Thick Butt Shingles, Bird's Double Twin Shingles, Bird's Individual Shingles, Bird's Giant Individual Shingles, Bird's Custom Made Shingles, Paroid Roofing and a complete line of Smooth Surfaced Roofings, Neponset Wall Board, Bird's Insulating Board, Neponset Black Building Paper and a complete line of waterproof building papers.

Reliability

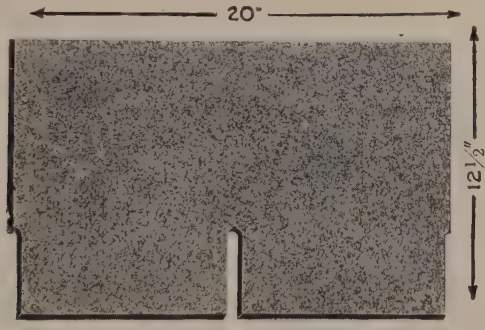
Bird's products are backed by 134 years of manufacturing experience.

Application

Full directions for the application of each of BIRD'S products are packed with the material. Architect, builder and owner should see that these directions are followed exactly.

Bird's Neponset Twin Shingles

These Shingles are two-in-one shingles 12½" deep by 20" wide. They have an extra wide butt and are self-spacing. They provide three layers of absolutely waterproof, fire-retardant protection on the roof. Handsomely slate surfaced in colors of Venetian Red, Lincoln Green, Blue-Black or Art-Blende. Adapted to roofs with a slope of 4" or more to the foot.



Neponset Twin Shingle

Bird's Super Twin Shingles

These shingles are specially suited to the handsome residence because the thickness gives the rugged appearance of slate slabs. When laid 4" to the weather three thicknesses of coverage are secured. When laid over wooden shingles it is recommended that they be laid 5" to the weather.

Bird's American Twin Shingles

These shingles possess the same qualities as Neponset Twins but are 10" deep instead of 12½" and are adapted to roofs with a pitch of 6" or more to the foot.

Bird's Art-Blende Shingles

Art-Blende is a combination of tints artistically and scientifically blended so that the color combination on the roof is unusually pleasing. The softness of tones commands admiration.

Bird's Double Twin Shingles

These are four-in-one shingles (a strip of four shingles), possess the same qualities as the Twin Shingles. Dimensions—Neponset Double Twins, 40" x 12½". American Double Twins, 40" x 10".

Bird's Hexagonal Twin Shingles

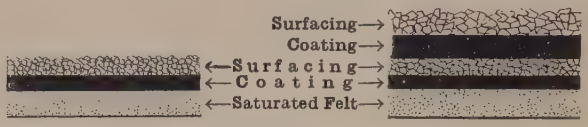
These shingles are self-spacing and self-aligning. When laid they form a hexagon and produce a wide double butt effect which gives the impression of unusual thickness, weight and durability as well as excellent shadow lines. These shingles have the smooth, even crushed slate surfacing characteristic of all of Bird's Shingles and are made in colors of Venetian Red, Lincoln Green, Blue-Black or Art-Blende.

Bird's Thick Butt Shingles

Made in both the square butt and hexagonal types. Afford roofs of distinctive appearance with two additional layers of protection. One of the features of these heavyweight (Thick Butt) shingles is their massiveness. The coarse heavy slate adds to the attractiveness of color effects. The butts are thick and heavy.

Cross section of average shingle

Cross section of Super Twin (Thick Butt)



Bird's Custom Made Shingles

Are actually made to your order for any particular requirements of color scheme and architectural style of your house thus providing a means of expressing individuality.

Bird's Insulating Board

Should be used throughout the house for all insulation against cold, heat and sound. As Insulating Lath in interior work it not only makes an ideal base for gypsum plaster but also acts as an insulator. This board takes a cold water paint or an oil paint giving a beautiful finish.

Paroid Roll Roofing

Bird's Paroid Roll Roofing has been used and endorsed for over a quarter century. It is heavier than ordinary smooth surfaced roofing, is pliable and will not crack in cold nor dry out in hot weather. It comes in rolls of either 108 or 216 square feet, with lap cement and nails. Has a special talc surfacing of bright gray color and unusual weather resisting qualities. Adapted to farm buildings, warehouses and similar structures.

Neponset Black Building Paper

Neponset Black Building Paper has been known and specified by architects for years as a WATERPROOF building paper of the highest grade. A strong bodied paper thoroughly saturated with asphalt, protected with glossy asphaltic coating on both sides, giving an absolutely waterproof paper. Recommended particularly for use:

1. Under all kinds of roofing.
2. Behind clapboards and shingles or stucco on the walls of buildings.
3. Between floors.
4. Between double floors that extend over an open porch.
5. Within walls of house, store or factory in place of back plaster.
6. For cellar lining.
7. For cold storage work.

Put up in rolls 36" wide containing 500 square feet, weighing 50 pounds per roll.

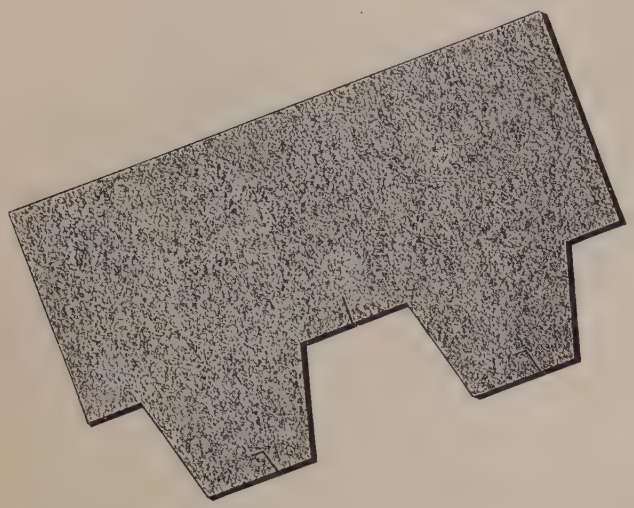
All Bird's Products are carried in stock by dealers in lumber and building supplies.

BIRD & SON, inc., East Walpole, Mass.

CYCLONE SAFETY SHINGLES

Made by FORD ROOFING PRODUCTS CO.

529 South Franklin Street, CHICAGO



Three Essentials of Cyclone Safety SHINGLES are SAFETY BEAUTY ENDURANCE

The Modern Asphalt Shingle:

With the development of materials that enter into the construction of the modern day home, a like improvement has been made in roofing materials to protect it from the ravages of weather and time.

This modern improvement in roof covering is the Cyclone Safety Shingle. It not only assures positive protection of the home and its occupants from the elements, but adds a distinctive note with its charming colors and beautiful hexagonal design.

The old faults of cupping, curling and blowing up, found in ordinary types of shingles are eliminated by the exclusive locking feature of the "Cyclone." Headlap of nearly seven inches provides a double and triple covering all over the roof.

Cyclone Safety Shingles have become the choice of builders, contractors and home-owners all over the country who insist on roof beauty and positive protection at moderate cost.

FORD ROOFING PRODUCTS CO., 529 S. Franklin St., Chicago

Safety:

To provide Safety and Protection from the elements are the primary functions of a roof. In performing its job, the "Cyclone" can truly be called the Safety Shingle, because it provides more of the necessary elements to secure this protection than most types of roof coverings.

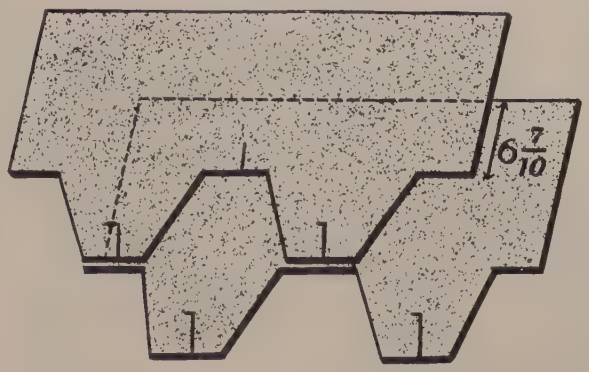
Double locked tabs positively prevent curling or blowing up in a severe wind or driving rain or cupping of the shingle from exposure. When cupping, curling or blowing up occurs, it not only detracts from the efficiency of the shingle itself but it also mars the beauty of the roof.

A long headlap of nearly seven inches rejects any possibility of rain or snow reaching the roof boards.

Endurance:

Long heavy tough fibred felt, thoroughly saturated with the finest of asphalt, forms the base of Cyclone Safety Shingle.

Coated with specially prepared asphalt and covered with slate and stone granules in nature's own colors provides a fire and time resisting covering. Double and triple thickness all over the roof adds an extra measure of endurance.



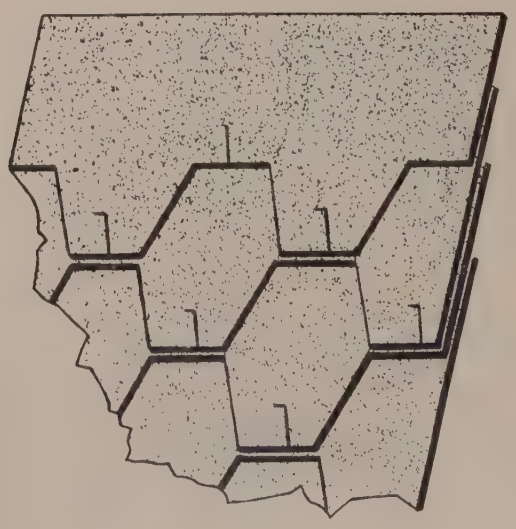
From every angle, the Cyclone Safety Shingle offers everything that is desirable in a roof covering — SAFETY — BEAUTY — and — ENDURANCE—at moderate cost.

Beauty:

Architects, builders and home-owners agree that a beautiful home must have a roof that will blend with its environment. The velvety tints and entrancing blends of Cyclone Safety Shingles await your selection, to enhance the beauty of your home.

The distinctive and charming hexagon design adds to the richness of a "Cyclone" roof with its tile-like shadow tones, so much sought for by architects and home-owners.

You can obtain Cyclone Safety Shingles from your local dealer in most any desired shade to conform with your decorative scheme.



FORD ROOFING PRODUCTS CO., 529 S. Franklin St., Chicago

Genuine RUBEROID ASBESTOS SHINGLES
(American and Hexagonal Methods)
Genuine RUBEROID UNIT SHINGLES
(Massive—Standard—Lock-down)
Genuine RUBEROID STRIP SHINGLES
(Hexagonal—Octagonal—Square-butt—Lock-down)
Genuine RUBEROID BUILT-UP ROOFS
(Smooth or Gravel Finish)

Genuine RU-BER-OID

SHINGLES — ROOFINGS

Colorful Varieties · Durable · Fire-Resisting

Genuine RUBEROID ROLL-ROOFING
(Smooth or Mineralized)
Genuine RUBEROID BUILDING PAPERS
(Saturated—Saturated and Coated)
Genuine RUBEROID ROOF-COATINGS
(Liquid—Liquid-fibre—Plastic)
Genuine RUBEROID PROTECTIVE PAINTS
(Damp-proofing and Insulating)

The illustration above shows the beauty of roof line and color achieved through the use of Genuine Ruberoid Asbestos Shingles. The American method of application has been used on this roof.

NATURE'S CHOICEST COLORS

Blended by Experts

In this day of color consciousness—roofs can no longer sell which are drab or colorless, nor can they be "spotty" or too brilliantly hued.

Fully realizing this, Ruberoid engineers in conjunction with a nationally famous color expert, spent months in perfecting scientifically correct color blends. Hundreds of different color combinations were experimented with—scores of model roofs were tried out on miniature houses of various architectural styles.

The result was shingles of soft, rich color tones—perfect in color balance.

Regardless of the type of home you wish to roof, you will find a *Genuine* Ruberoid Shingle correct in color value and especially made to harmonize with the architecture—color scheme—and scenic surroundings of your home.

Write for samples and descriptive literature.

A *Genuine* RUBEROID ROOF FOR EVERY PURSE AND PURPOSE

No matter what type of building you wish to roof, there is a fire-resisting *Genuine* Ruberoid Roof to meet the conditions imposed and to fit your pocketbook.

Each class of *Genuine* Ruberoid Roofs—asbestos shingles—asphalt shingles—or roll-roofings—represents the utmost in beauty and in quality—dependability that translates itself into years of satisfactory service.

Genuine RUBEROID ASBESTOS SHINGLES

Manufactured from asbestos rock and the finest quality cement, and built up in layers under hydraulic pressure, Ruberoid Asbestos Shingles provide a fire-proof life-time roof.

There is a wide choice of colors in natural, variegated and mottled effects. This coloring is indelibly impregnated—your assurance of permanent non-fading beauty.

Regardless of whether you select the American or Hexagonal method of application, Ruberoid Asbestos Shingles will provide you beauty in the form of a strong, durable and fire-proof roof.

Genuine RUBEROID MASSIVE UNITS and HEX-STRIPS

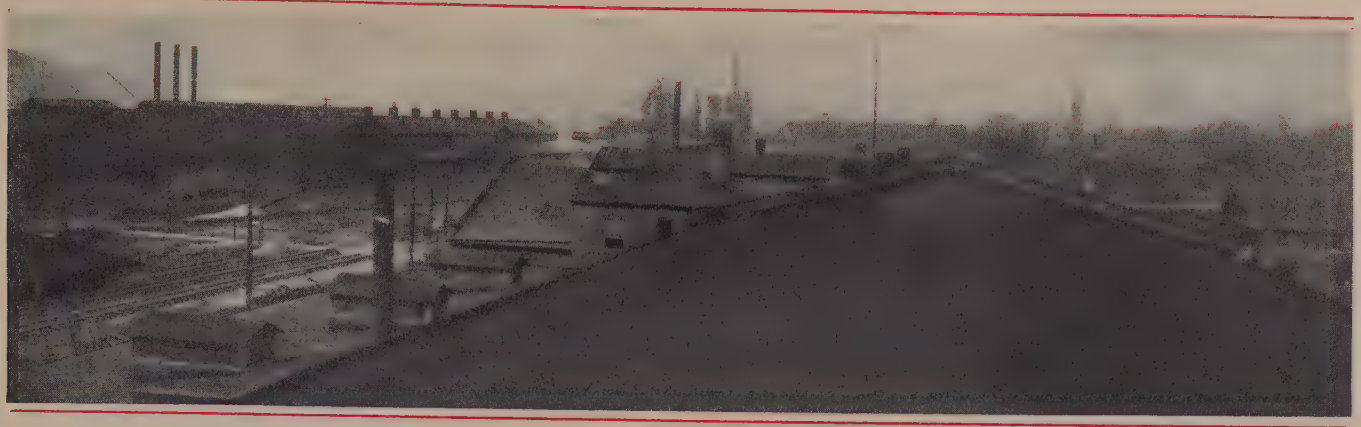
Two popular, extra size, extra weight and extra value shingles. Both are 40% thicker than usual shingles, but because of their size the finished roof costs no more. The money saved in application time and labor is put in a thicker, better roof.

This extra thickness provides more than extra life. It assures greater beauty—for each butt casts deep shadows which give the roof massiveness.

This beauty is further enhanced by the distinctiveness of the mineral finishes used—a rich softness of color that reflects quality, style and good taste.

The roof shown in the upper illustration is Genuine Ruberoid Massive Hex-strips. The lower panel illustrates a roof of rare beauty—Massive Units.

The RUBEROID Co., 95 Madison Ave. New York City



A 32-year-old Ruberoid Roof on one of the Foster Store Company's buildings, Ironton, Ohio. This remarkable service record is characteristic of thousands of Genuine Ruberoid Roofs on industrial buildings, barns, sheds, etc.

Genuine RUBEROID ROLL-ROOFINGS

Genuine Ruberoid Roll-roofings are made in two finishes, smooth-surfaced and mineralized. No expense is spared to make these the finest roofings possible to make. As a result there are many examples today where *Genuine* Ruberoid has been on roofs for more than 25 years and is still in good condition.

Smooth-surfaced Ruberoid comes in three weights, medium, heavy and extra. It is used primarily for farm or industrial buildings. When the roof is flat Ruberoid Built-up Roofing is used with layers of asphalt felt mopped in hot asphalt.

Genuine Ruberoid Mineralized Roll-roofing is supplied in one weight only, heavy. Because of its colorful surfacing and its harmony in finish with asphalt shingles, it is popular for porch roofs, garages or other buildings adjacent to homes.

ROOF-COATINGS and CEMENT

(Ruberoid Plastic)

Ruberoid Plastic is made of asphalt gums mixed with asbestos fibres. It is ideal for repairing leaky seams, cuts, rents, etc., in composition or metal roofs and for pointing up chimneys, flashings, firewalls, etc. It is of trowelling consistency and can be had in cans and drums of various sizes.

Genuine RUBEROID BUILDING PAPERS

No home is well built unless it is properly sheathed—made airtight against the ravages of wind and weather. In the Ruberoid line of building papers you have a wide choice of sheathing that will not rot or disintegrate as in the case of unsaturated building paper.

Genuine Ruberoid Building Papers are odorless, waterproof and airtight, and will be found in well built houses between the clapboards, behind brick or stucco, window frames, floors and as an interlining between roof deck and roof.

These papers will keep your home warm in winter and cool in summer. They may be obtained in various weights according to the insulating protection desired and the price you may wish to pay.

Ruberoid Roof-Coatings

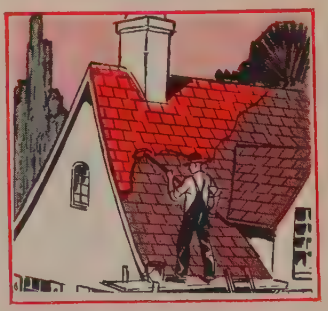
Liquid and liquid-fibre. If your roofs need a preservative use Ruberoid Roof-coating as it penetrates into the felt base and adds years and years of roof life at a trifling cost. On metal roofs it forms a protective coating that effectively resists the elements.

Should your roof be badly weather worn use Ruberoid Liquid-fibre which is a heavier bodied material than liquid-coating. Neither of these products will dry, chip, soften or run. Furnished in red and black, in drums and various size cans.

Ruberoid Roof-Surfacer

Where a wider range of colors than red and black is desired for wood shingles, smooth surfaced asphalt roofs, tin roofs, etc. Ruberoid Roof-Surfacer will particularly appeal to you.

The colors are bright and non-fading, while the ingredients have been carefully selected to insure the utmost in protection. Will not peel, check or crack regardless of the surface on which it is used. Furnished in convenient size cans or in drums.



Genuine RUBEROID ASBESTOS SHINGLES
(American and Hexagonal Methods)
Genuine RUBEROID UNIT SHINGLES
(Massive—Standard—Lock-down)
Genuine RUBEROID STRIP SHINGLES
(Hexagonal—Octagonal—Square-butt—Lock-down)
Genuine RUBEROID BUILT-UP ROOFS
(Smooth or Gravel Finish)

Genuine
RU-BER-OID
SHINGLES — ROOFINGS

Genuine RUBEROID ROLL-ROOFING
(Smooth or Mineralized)
Genuine RUBEROID BUILDING PAPERS
(Saturated—Saturated and Coated)
Genuine RUBEROID ROOF-COATINGS
(Liquid—Liquid-fibre—Plastic)
Genuine RUBEROID PROTECTIVE PAINTS
(Damp-proofing and Insulating)

The RUBEROID Co., 95 Madison Ave., New York City

"Not a Kick in a Million Feet"

MULE-HIDE

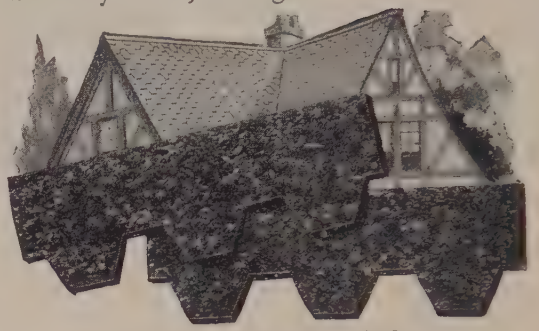
ASPHALT ROOFS ASBESTOS

Manufactured by

The Lehon Company, 44th to 45th St. on Oakley Blvd., Chicago

Mule-Hide Four Unit Type Shingles

This popular multiple type shingle is manufactured of standard quality Mule-Hide all rag felt that, after being impregnated with imported Mexican Asphalt provides a roof that is absolutely waterproof and all weather resisting. Two sizes are available: 10x36" weight 190 lbs. per sq.; 12½x36" weight 240 lbs. per sq. Colors Red, Green, Blue-Black, Golden Brown and Rainbow.



Mule-Hide 3 Tab Hex Shingles

"The Prettiest Roof in Town" is the usual compliment passed on this more artistically designed shingle. Practical in design, individually attractive, this hexagon designed shingle has all the advantages of quality found in other styles of Mule-Hide Shingles. Contractors and home builders as well as present home owners who plan to modernize their roof by recovering, will be interested in this shingle because of its reasonable cost. Two sizes available, 10x36" weight 160 lbs.; 12x36" weight 195 lbs. Colors Red, Green, Golden Brown, Blue-Black, Rainbow. Also Persian and Onyx Blends in the larger size.

Mule-Hide Giant Three Unit Type Shingles

Double thick and massive in size this heaviest of all unit type asphalt shingles produces a deep, heavy shadow line that is pleasing to the eye. Automatically self spacing and self aligning this shingle is easily and quickly applied. Only 83 units needed to cover 100 sq. ft., an economic feature that makes for reduced labor cost. Weight of these heavy shingles 240 lbs., size 12x36" Exposed 5" to weather. Colors Red, Green, Blue-Black, Golden Brown, Rainbow and Persian Blend.

Mule-Hide Giant Double Thick Individual

Heaviest and largest individual type shingle manufactured. Being thicker and heavier it casts heavy shadows that produce beautiful two-tone effects. The same good grade of selected all rag felt and genuine imported grade Mexican Asphalt used exclusively in the manufacture of this shingle. Where long wearing service is essential this shingle is heartily recommended. Size 10x15¾". Weight 300 lbs. Colors Red, Green, Blue-Black, Terra Cotta tone, Brown tone, Purple tone, Onyx Blend and Rainbow.

Mule-Hide Smooth Finish Roll Roofing

The original Mule-Hide Roofing developed more than twenty years ago. The extra strength and toughness of this product long ago established the record "Not a Kick in a Million Feet." Made of selected all rag felt, thoroughly saturated with Mexican Asphalt. This roofing is made in three weights, 50, 60 and 70 lbs. Where long wearing service is demanded this extra strong roof will meet every reasonable expectation.

Mule-Hide Asbestos Shingles

As enduring as the rock of the ages. Mule-Hide Asbestos Shingles are absolutely fireproof being composed of unburnable cement and natural mined asbestos. Manufactured by what is termed the laminated process (built up layer upon layer) these shingles have greater flexibility than the more common grades of rigid shingles. Practically indestructible, these sturdy shingles assure everlasting protection. Easily applied over old shingles. May be had in these unfading colors: Pearl Gray, Newport Gray, Blue-Black, Red Veneered and Green Veneered.

Mule-Hide Slate Surfaced Roofing

The same good quality materials—all rag felt base and imported quality Mexican Asphalt used in the manufacture of this quality as are used in the making of Mule-Hide Smooth Finished roofing. The uniform slate surfacing gives added fire resisting protection at the same time a roof of pleasing unfading color. May be had in three weights and in colors Red and Green in the lighter weights. In the heavier weight Red, Green and Blue-Black.

MULE-HIDE BUILT-UP CONSTRUCTED ROOFS over concrete, gypsum, tile insulation and wood for flat roof decks, apartment buildings, hotels, garages, etc. Write us for detailed specifications for applying this modern type roof.

Stained Shingles

SAMUEL CABOT, INC.

141 Milk Street, Boston, Mass.

FOR INSULATING MATERIAL SEE PAGE 116

Cabot's Creosote Stained Shingles

Samuel Cabot Incorporated

Description—Grade A, U. S. Dept. of Commerce Standard, red cedar shingles, ready-stained with Cabot's Creosote Shingle Stains.

Sound live wood; uniform thickness; edge grain; even butts; do not warp or curl. Thoroughly preserved by complete immersion in Cabot's Creosote Shingle Stains. Sold in original bundles, as packed at the mill, guaranteed full count.

The warmest, the most economical and the most picturesque house finish.

Standard Colors—Weathering Browns, Light and Dark Bungalow Browns, Bark Brown, Warm Brown; Light and Dark Tile Reds, Maroons, etc.—A complete range of these handsome and durable colors for roofs and walls.

Light, Dark and Medium Moss Greens—Our moss greens have a richness and depth of color such as can only be produced by the strongest and purest pigments.

House on Portland Heights, Portland, Oregon.
Cash and Wolff, Architects. Harry Phillips, Contractor.
Roof of Cabot's Creosote Stained "Anteaks," Exterior Woodwork finished with Cabot's Creosote Shingle Stains, Insulated with Cabot's Quilt.

Weathered Grays—Our grays give the true natural seashore gray tones.

White Shingles—Cabot's Shingles are also furnished ready-stained with No. 1166 White Primer, to be finished after the shingles are laid, either with (1) a brush coat of No. 1166, (2) one or two brush coats of Cabot's Old Virginia White or (3) one or two coats of Cabot's Double-White.

Blended Roofs—All color combinations are blended in the bundle so they can be laid without blending on the job.

Anteaks and Irregular Butts—"Royals" treated by our patented machines to give aged and antique effects, and with irregular butts, are sold under our trade-mark "Anteaks." Irregular butts are also furnished in regular type shingles, all sizes, at slight extra cost.

Samples:

Samples of standard colors sent on request.

Cabot's Creosote Stained Shingles

Sizes:

24-in. "Royals," 18-in. "Perfections" and 16-in. "XXXXX," the highest grade shingles made, are used exclusively for Cabot's Creosote-stained Shingles.

"Royals" for walls, laid with 10 to 12-in. exposure, are much more artistic than dressed siding, much warmer and the cost is actually lower. "Perfections" and "XXXXX" are the standard regular sized shingles for walls and roofs.

Deliveries:

Prompt deliveries from staining plants in Boston, Chicago, Baltimore, Philadelphia, Newark, New Rochelle, Columbus, Cleveland, Los Angeles, Seattle, San Francisco, etc., and from warehouses at all central points.

COVERING CAPACITY OF CABOT'S CREOSOTED SHINGLES, SQUARE FEET PER SQUARE AT VARIOUS EXPOSURES—STANDARD GRADES—RANDOM WIDTHS

	Approx. weights per square, in lbs.	4-in. exp.	4½-in. exp.	5-in. exp.	5½-in. exp.	6-in. exp.	6½-in. exp.	7-in. exp.	7½-in. exp.	8-in. exp.	8½-in. exp.	9-in. exp.	10-in. exp.	11-in. exp.	12-in. exp.
1 square of 16 in. (4 bun. 20/20 pack.)	160	80	90	**109**	110	120	130	140	150	....	....	....	....	....	....
1 square of 18 in. (4 bun. 18/18 pack)	180	....	....	....	**100**	109	120	129	138	148	157	....	....	....	....
1 square of 24 in. (3 bun. 14/14 pack)	167	....	....	....	....	....	....	....	75	80	85	90	**100**	110	120

Note: This table is based on 100 sq. ft. to each square. But Cabot's Shingles are all sold in the original bundles as packed at the shingle mills under the Official Grading and Packing Rules of the Shingle Manufacturers' Association, and the tables of the Red Cedar Shingle Bureau show that *our* square actually covers from 3% to 8% more than *our* table claims.

SAMUEL CABOT, INC., 141 Milk St., Boston, Mass.

Twice the color life

MAUK
DOUBLE-DIPPED
Shingles Stained Under Pressure

Rich blending colors—bright lively colors—charming in the *new* shingled houses you see. But how long will these colors last?

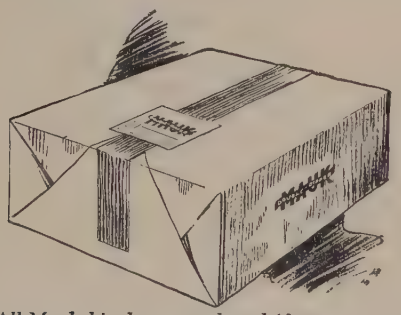
Years and years if the shingles are Mauk Double-Dipped. For these shingles are stained *twice* under high hydraulic pressure with special basic stains.

This process of applying stain is patented and used exclusively by Mauk. Because of it, Double-Dipped shingles have double or triple the life of ordinary stained shingles (proved by the Finishing Research Laboratories).

Consider what this additional color life means to you in lessened up-keep. Depreciation is kept at a minimum. Resale value is increased.

The Mauk Process

Only basic mineral pigments are used in the Mauk stains. These pigments are ground exceedingly fine (to pass a 325 mesh screen) and combined with pure linseed oil and creosote.



All Mauk shingles are packaged (dust-proof, practically rain-proof) and prominently trade-marked. The shingles are kept clean, dry and fresh and you are protected against substitution.

Basic pigments don't change color. A Mauk green stays green. It doesn't fade to a yellowish brown or change to a streaked blue. A Mauk grey doesn't turn greenish but keeps its first true color.

These stains are applied under 32 tons of hydraulic pressure to strictly clear, vertical grain, red cedar shingles.

This pressure fills the surface pores of the wood with pigment. It forces the creosote clear through the shingle.

Two Coats for Mauk Shingles

But pressure staining alone isn't enough! Only a limited amount of stain can be applied with one treatment no matter what method is used.

By the Mauk process, two gallons per square are forced into the shingles. This is a heavier

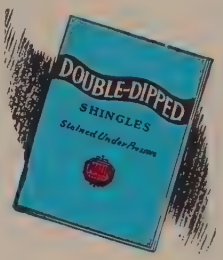
coat than most stained shingles have for a complete finish.

After a thorough drying and seasoning, *a second pressure* treatment is given Mauk shingles and 1⅓ more gallons of stain are applied per square.

This second coat gives better coverage and greater adhesion.

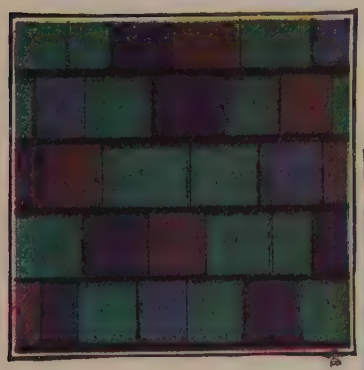
Mauk colors don't wash off with heavy rains. They don't dry up and dust off or change under the fierce rays of the sun.

Choose shingles for their architectural beauty. Demand Mauk Double-Dipped Shingles, Stained under Pressure, because their first beauty lasts longer.



Get this book with pictures of Mauk shingle-clad homes (in color) and further details before you build. It is sent free to interested parties.

Let us send you the address of the nearest dealer handling Double-Dipped shingles. Then you can see for yourself why these twice-stained, pressure-stained, shingles are so much better.



Mauk variegated combinations are well balanced in color harmony. They are the selection of specialists—packed and packaged at the factory—delivered ready to apply.

Mauk shingles are stocked in popular colors. All are stained twice under pressure.

The C. A. Mauk Lumber Co.

Toledo, Ohio

MAUK
DOUBLE-DIPPED
Shingles Stained Under Pressure

WEATHERBEST STAINED SHINGLES

Manufactured by WEATHERBEST STAINED SHINGLE CO., Inc.

General Offices: NORTH TONAWANDA, N. Y.

Plants at NORTH TONAWANDA, N. Y. and ST. PAUL, MINN.

Warehouses in Leading Centers

Products

WEATHERBEST Edge Grain Red Cedar Stained Shingles for roofs and side-walls; WEATHERBEST Colonial White Stained Shingles; WEATHERBEST Thatched Effect Stained Shingles; WEATHERBEST Creosote Shingle Stain; WEATHERBEST Genuine Hand Rived Old Colony Red Cedar Shakes.

For Life-Long Roofs and Sidewalls

WEATHERBEST Stained Shingles are used on sidewalls as well as roofs and when applied with zinc-coated nails that do not rust will give 50 years of service on roofs and last as long as the building on sidewalls. The soft, semi-transparent colors add much to the attractiveness of a home as WEATHERBEST stain emphasizes the grain of the wood just enough so that the flat tone of a painted surface is absent.

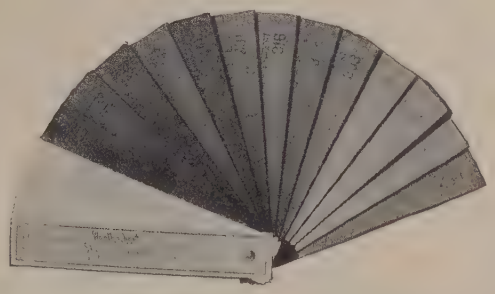
Reliability and Quality

WEATHERBEST Stained Shingles have been on the market for seventeen years and can be thoroughly relied upon to give entire satisfaction. During this period the constant improvement of the WEATHERBEST process of staining has always been based on the policy: "Not to cheapen materials or process to meet price competition."

Each bundle carries the WEATHERBEST label and is our guarantee of perfect material and lasting colors. Only the finest 100% Edge Grain All Clear Red Cedar shingles are used in the manufacture of WEATHERBEST. Every shingle is perfect from tip to butt. WEATHERBEST Stain consists of the strongest color pigments obtainable, high grade preservatives and linseed oils—all properly mixed in our factories in the correct proportion to insure lasting, uniform colors. All shingles are unbundled at our factories and treated separately, not bundle dipped as is the case with many other stained shingles. After treatment, the shingles are dried, inspected, rebundled and come ready to lay. No brush coat is required after shingles are laid.

Variety of Weather-Tested Colors

Twenty standard WEATHERBEST colors, any number of color schemes for beautiful variegated color roofs allow an almost unlimited means of carrying out any color idea desired.



A postal will bring this set of color samples which shows Weatherbest colors on Red Cedar.

Sizes and Service

WEATHERBEST Stained Shingles are furnished in 16" (regular and "Doubl-Thik"), 18" and 24" (regular and "Doubl-Thik") sizes. Lumber dealers everywhere carry popular colors in stock and quick shipping service is maintained for dealers from our factories and warehouses.

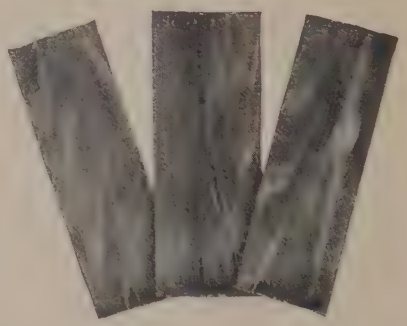
Weatherbest Variegated Color Roofs

For WEATHERBEST Variegated Color Roofs usually several shades of one color are used. We properly proportion and mix the various colors selected in the bundle so that the carpenter lays a WEATHERBEST Variegated Color Roof in just the same manner as an ordinary one color roof and without any extra labor. Ask for color photogravures showing homes with WEATHERBEST Variegated Color Roofs.

Why Weatherbest Always Lie Flat

The prime essentials in stained shingle effects which give permanent satisfaction are (1) even, durable color and (2) freedom from curling and warping. WEATHERBEST Edge-Grain shingles can be counted on for these essentials. The two pictures below explain why WEATHERBEST colors last and the shingles do not curl.

100% Edge-Grain Red Cedar Shingles used in the manufacture of WEATHERBEST. Edge-Grain shingles readily absorb and retain the maximum amount of color. Edge-Grain and the preservative is the reason why WEATHERBEST Stained Shingles lie perfectly flat during their many years of service.

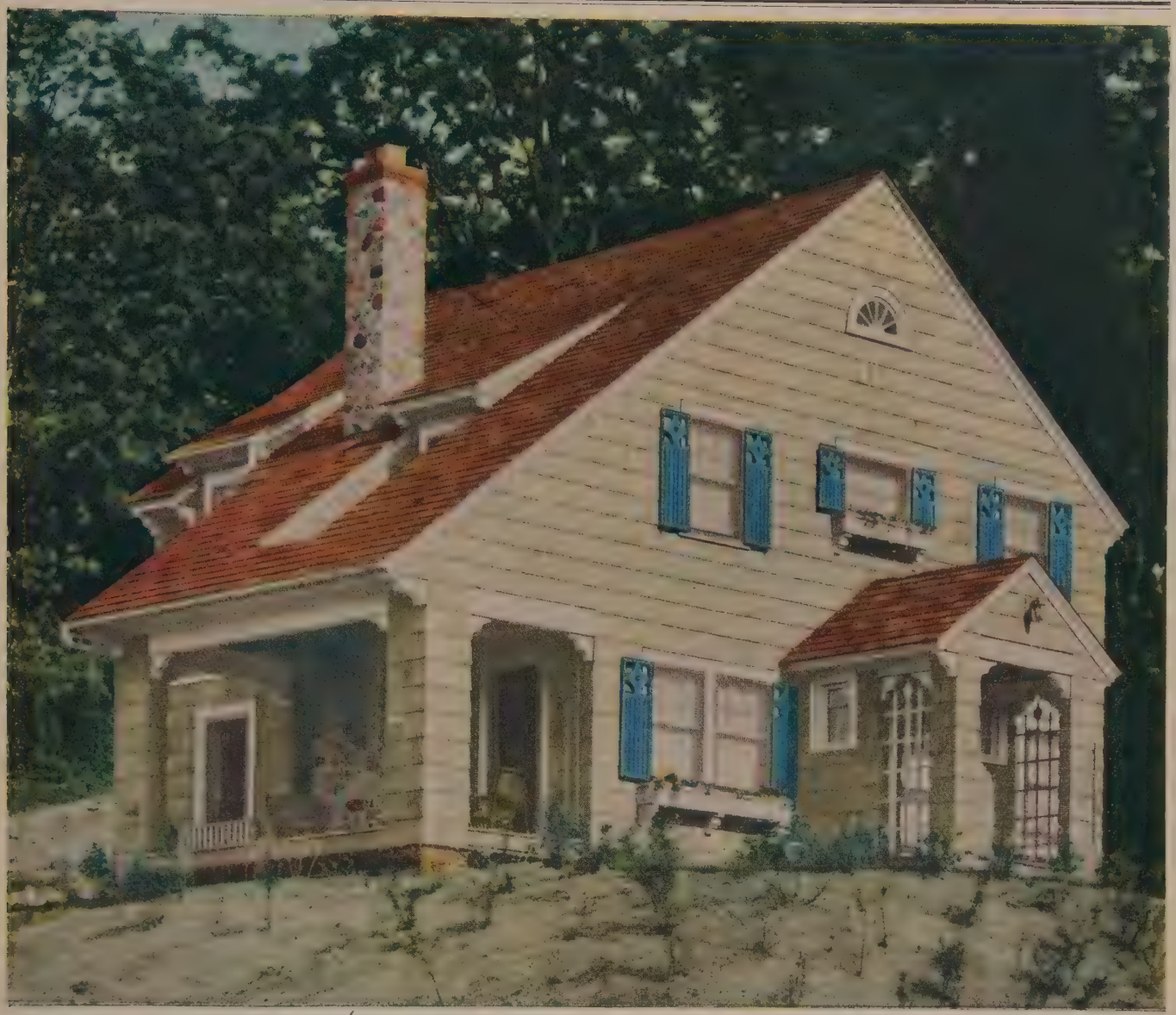


The picture opposite shows poorly manufactured, flat or "slash" grain Red Cedar Shingles. The hard, flint-like surface of the flat grain cannot absorb and hold color. These are the kind of shingles that curl, warp and split after a few years of service.

Weatherbest Old Colony Hand-Rived Shakes

To those desiring the true beauty of the old-time shake we unhesitatingly recommend WEATHERBEST Old Colony genuine Hand Rived Tapered Red Cedar Shakes. These shakes are manufactured in 25", 31" and 37" lengths. They are of random width and vary in thickness as did those split by the old time settlers. An ideal roof and sidewall covering where "something different" is desired. We have prepared a brochure showing details of WEATHERBEST Old Colony shake and roof sidewalls as well as pictures of houses covered with WEATHERBEST hand rived shakes. Send for literature descriptive of shakes and request samples.

WEATHERBEST STAINED SHINGLE CO., Inc., North Tonawanda, N. Y.



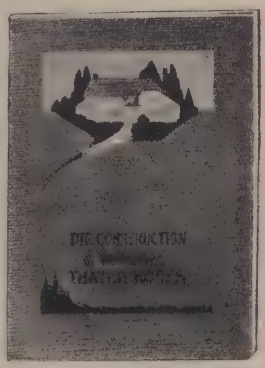
Residence of Mr. G. G. Borthwick, Syracuse, designed by Architect James D. Meehan. Roof: 24" WEATHERBEST Stained Shingles in Variegated Brown. Walls: 24" WEATHERBEST in Gray.

Send for Color Photogravures

The above picture was selected from a set of WEATHERBEST Color Photogravures. These photos show many WEATHERBEST Stained Shingle homes of different designs in full color. A great help to the home builder in selecting colors for roofs and sidewalls. These photogravures will be gladly sent on request. Just ask for complete set of WEATHERBEST Color Photogravures.

Weatherbest Thatch Roofs

The quaint thatched straw roofs of Old England always possessed a subtle charm but were too short lived for present day demands. WEATHERBEST Thatch Roofs have the soft, rounding curves and charm of those old straw roofs and provide a roof that will last for more than a lifetime. Full instructions for constructing a WEATHERBEST Thatch Roof, color suggestions and full page illustrations are given in the booklet pictured here and sent free.



Plan Now to Modernize the Present Home

If you own a home that is growing old—WEATHERBEST Stained Shingles right over the old wood or stucco sidewalls will work wonders in transforming it into one of more modern day design. This method of adding many dollars in re-sale value to old homes is being done all over the country.

Let Our Service Department Help You

The free WEATHERBEST Home Modernizing Service is designed to assist owners desiring to modernize the exterior of their homes. It consists of furnishing suggestions in sketch form showing how the old house can be changed at a minimum of cost to conform with the lines and styles of present day designs. We do not furnish detailed floor plans or architectural drawings as these can best be handled by your local architect if changes are so extensive as to require such service. Send in snap shot views of your present home and let us show how it can easily be changed to give more modern day lines.

WEATHERBEST STAINED SHINGLE CO., Inc., North Tonawanda, N. Y.

METAL SPANISH TILE

Made by THE EDWARDS MFG. COMPANY

NEW YORK 412-462 Eggleston Ave., Cincinnati DALLAS, TEXAS

An "EDWARDS"
Metal Spanish Tile Roof
Beautiful—Durable—Economical

affords a remarkable transformation when applied to a house—all of the charm of the old Spanish Terra Cotta Roofing Tile is preserved, even to the color.

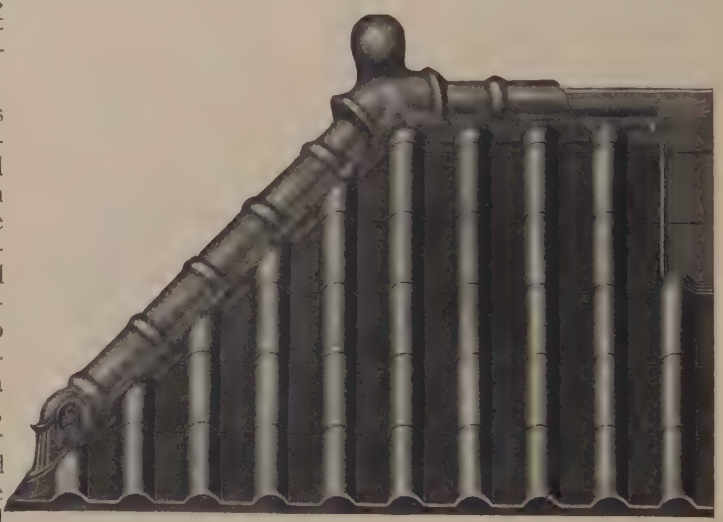
An Edwards Metal or Tile Roof For Every Type of building, is a real commercial asset and will bring a better return in rent or sale.

Edwards Metal Roofings made to have the appearance of wood shingles, tile, slate, or any other roofing effect, and none of these fine artistic effects will cost any more than a plain, commonplace roof.

All Edwards Metal Roofing is easy to lay—no big expense for skilled labor—storms and winds will not wrench it loose. It is lightning-proof and fire-proof—Reduces Insurance Rates.

The Edwards Manufacturing Company, rolling its sheets in its own mills, doing its own stamping and carrying the work from the raw material to the finished product, has developed the artistic Metal Spanish Tile to the highest point ever reached. To you this means that Edwards products afford a wider choice of designs, more complete and better all-round service and lower cost, made possible by modern equipment and a vast production. Because of our centrally located main plant and the two branches in the East and Great Southwest, we are prepared to offer you exceptionally quick and certain deliveries with a material saving in shipping costs. Spanish Tile shipped unpainted or painted either green or red.

We also make Metal Shingles of Copper, Zinc, Galvanized Steel or Tin. Also make Cornices, Plain, Corrugated and Galvanized Sheets; Barn Roofings, Filling Stations, Fire-Proof Doors and Shutters, Gutters and Conductor Pipes and Fittings, Garages, Metal Ceilings, Keyridge Lath for Partitions, Metal Awnings, Marquise, Portable Buildings, Tin Clad and Kalamein Doors, Sheet Metal Stampings, Siding, Skylights, Theatre and Store Fronts, Ventilators and Zinc Ornaments.



THE EDWARDS MFG. CO., 412-462 Eggleston Ave., Cincinnati, Ohio

"Imperial" Vitreous Shale Roofing Tiles

SALES OFFICES:
NEW YORK—565 Fifth Ave.
WASHINGTON—738 15th St. N. W.
PHILADELPHIA—1315 Walnut St.
PITTSBURGH—355 Fifth Ave.

Made by LUDOWICI-CELADON COMPANY

GENERAL OFFICES: 104 S. Michigan Ave., CHICAGO, ILL.

Factories: New Lexington, Ohio; Peru, Kansas; Coffeyville, Kansas

SALES OFFICES:
CLEVELAND—1836 Euclid Ave.
CINCINNATI—622 Broadway
ST. LOUIS—317 N. 11th St.
KANSAS CITY—1004 Baltimore Ave.

Product:

This company manufactures "Imperial" Shale Roofing Tiles—a very high grade product made from the best of raw material and with the most modern machinery, every detail being carefully supervised by skilled artisans.

Attractiveness:

A roof of Imperial Shade Tiles can be constructed to harmonize with any type of dwelling. Their rich, warm colorings and pleasing play of lights and shadows add to the beauty of any home. No other type of roofing can truthfully imitate the variegated color effects that hard-burned tiles alone yield permanently.

No Heavier Under-Construction Necessary:

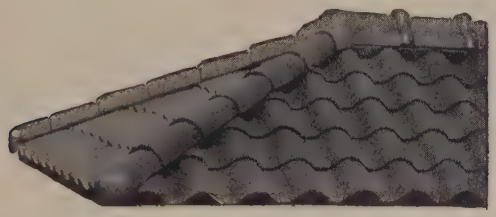
Tile roofing does not require much heavier underconstruction than other roofing materials—2x6-inch wood rafters, such as are used for ordinary residence construction have sufficient strength to support tile roofing when spaced not more than 16 inches on centers.

Advantages of Imperial Tile Roofing:

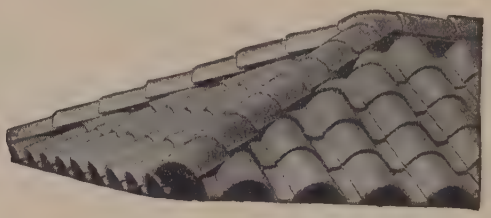
The first cost is its *only cost.* No paint or stain is needed to retain its original beauty. Examples of their everlasting quality is seen on every hand. European cities abound with structures protected for centuries by their roofs of ancient tiles. Sun, wind, rain or climatic changes have no effect on their wearing qualities or coloring. If properly applied they never require replacement or repairs. They are absolutely weather-proof and non-conductive—making the house warmer in winter, cooler in summer and so strictly fireproof that insurance companies allow a reduction in rates on structures covered by them.

Many Shapes, Shades and Textures:

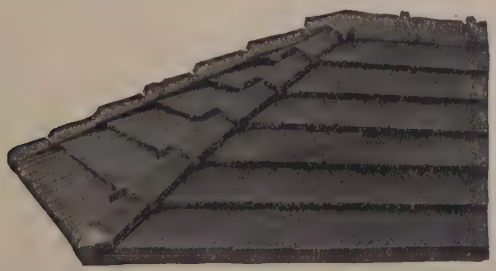
In addition to the four standard shapes shown below, there is an almost unlimited variety of shapes, shades and textures that readily lend themselves to distinctive roofing effects.



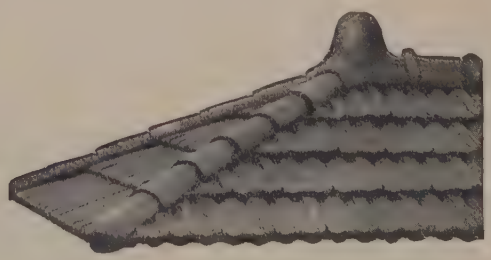
Imperial Spanish Tiles: Are particularly adapted to those styles of architecture that add so much to the picturesqueness of Southern Europe, from the massive buildings of classical form to the small bungalows where romantic or unusual effects are sought. Tiles are formed with a lip-and-lap lock that provides positive protection from the weather. Length 13¼ inches; Width 9¾ inches; average exposure 8¼x10¼ inches; average pieces per square 171; actual weight per square 950 pounds; shipping weight per square, with fittings, 1050 pounds.



Imperial Straight Barrel Mission Tiles: Are recommended for use where a rough and polychromatic effect is desired. Obtainable in an almost unlimited range of colors and shades, it is possible to tone a roof to harmonize ideally with the building it covers and the surroundings. Can be laid either random or regular exposure. Average exposure in length, 11¼ inches; width, center to center of covers, 11½ inches; average pieces per square 224; actual weight per square 1200 pounds; shipping weight per square, with fittings, 1300 pounds.



Imperial Closed Shingle Tiles: A pattern widely used to carry out the idea of Colonial or Early English architecture. Has a tongue-and-groove lock and is far superior in actual strength to the ordinary flat shingle. In depth of reveal it accentuates the horizontal line, avoiding the monotonous effect of other flat roofing material. Length 11 inches; width, 8¾ inches; average exposure 8x8 inches; average pieces per square 225; actual weight per square 900 pounds; shipping weight per square, with fittings, 1000 pounds.



Imperial French Tiles: An "all-around" tile that may be used with almost any type of house. Has a tongue-and-groove lock. While the general effect is flat, the convolutions in the surface afford considerable play of light and shadow. Length 16¼ inches; width 9 inches; average exposure 8⅛x13⅜ inches; average pieces per square 133; actual weight per square 925 pounds; shipping weight per square with fittings, 1025 pounds.

LUDOWICI-CELADON COMPANY, 104 S. Michigan Ave., Chicago, Ill.

Hawthorne Roofing Tile

Residence Kenilworth, Illinois
W. F. Blades, Builder

Hawthorne Roofing Tile offers the home builder a permanent and beautiful roof at a moderate cost. It has been the solution of the roofing problem for many home builders throughout the United States, and in every case has it proven satisfactory. This material is a perfected product, designed to bring out those qualities demanded of the ideal roof; it is Permanent, Fire Safe, Economical and Beautiful.

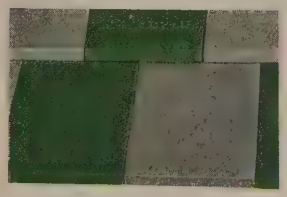
PERMANENCE: Concrete is recognized as the most permanent of all building materials. Hawthorne Tile is made of a correctly proportioned mixture of Portland Cement and a clean, well graded sand. The curing process developed after close observation and study brings out the greatest strength and permanence in the material. In other words, Hawthorne Tile is composed of a concrete mixture so cured that it will never wear out or disintegrate. The tile passes all practical strength tests. Once placed on the roof it will not break under normal conditions.

FIRE SAFENESS: Hawthorne Tile is absolutely fireproof. Spectacular tests made at our plant and in the laboratories have proven that the tile will not burn or break up under any conditions. There is absolutely no danger of the home being ignited by flying embers from nearby conflagrations.

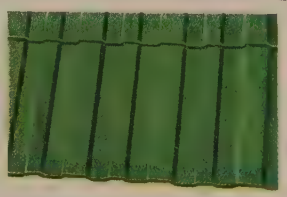
ECONOMY: The fact that the tile is practically indestructible eliminates the necessity of repeated repairs. Although the first cost may be slightly higher than that of perishable roofing materials, this initial cost is more than saved during the first ten years life of the building. If at any time it should be necessary to replace a tile, through accidental breakage, it can be done quickly and at a very little expense. Another saving is effected in that the method of laying the tile provides an insulating air space which saves considerably in roof construction and in fuel bills.

BEAUTY: Hawthorne Tile is beautiful. The impervious surface is always clean; rain washes the dirt off and not in. It is possible for the home builder with an eye to the combined effect of beautiful materials, to select a roof having all the requirements of usage and at the same time becoming part of a distinctive and pleasing architectural scheme. Hawthorne Tile is manufactured in fourteen standard colors and four styles, thus making it possible to select a color and style of tile suitable for any type of home.

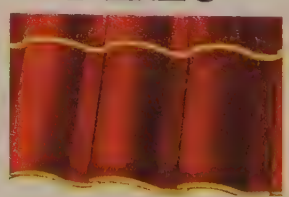
FOUR STYLES:



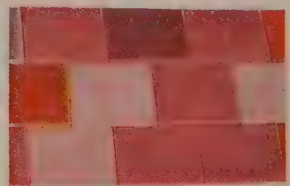
Closed End Shingle Tile



French Tile



Spanish Tile



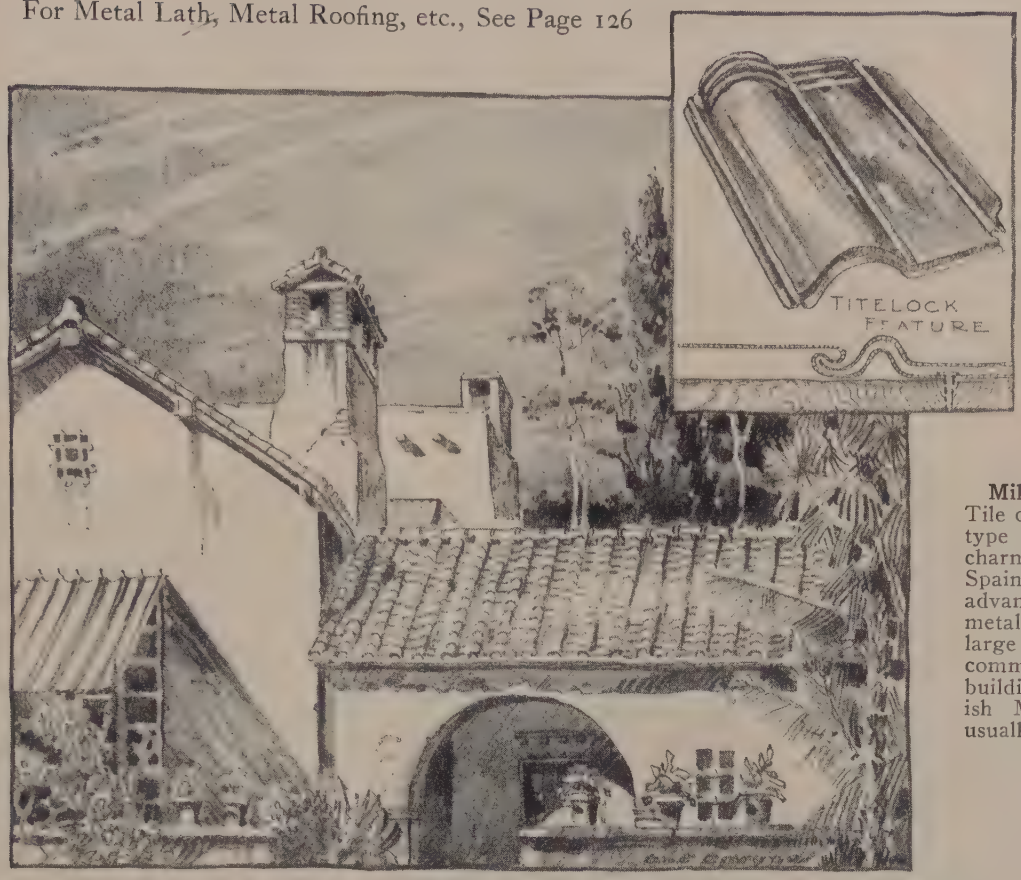
English Shingle Tile

For Roofs of Enduring Beauty

HAWTHORNE ROOFING TILE CO., 228 N. La Salle St., Chicago, Ill.

MILCOR
METAL TILE ROOFING

For Metal Lath, Metal Roofing, etc., See Page 126



Milcor Spanish Metal Tile carries a distinctive type of beauty—a rare charm of quaint old Spain, plus the practical advantage of enduring metal. For residences, large or small . . . for commercial or public buildings, Milcor Spanish Metal Tile is unusually popular.

Beautiful, Firesafe Roofs of Enduring Metal

Along with the striking beauty of Milcor Spanish and American Metal Tile come many economic advantages. They are firesafe, lightning-proof and unaffected by temperature changes. When properly laid with the famous Milcor "Titelock" method of fastening each piece, the roof will remain permanently secure and leakproof and, of course, will not break, crack or chip. The relatively light weight of Milcor Metal Tile does not require heavy supporting structure. The resulting economy of building and maintenance will be appreciated.

Because of the ease with which a Milcor Metal Tile roof may be laid, there is a substantial labor saving. This tile is regularly furnished painted red or green or galvanized, and we recommend them made of ARMCO Ingot Iron or ANACONDA Copper. Copper tile is everlasting and takes on, with weathering, a beautiful oxidized copper-green shade.

For residences of all types, visible portions of apartment roofs, hotels, churches, theatres, hospitals, schools, libraries and other public buildings, Milcor Metal Tile Roofing has no equal. It minimizes upkeep costs and assures a permanently beautiful finish.

Full information promptly furnished. A Milcor booklet "Safe Roofs" describes and illustrates Milcor Metal Tile. It is sent free on request. Please mention this book.

Milcor American Metal Tile is of a different beauty. It is simple in design . . . charming in its colorful atmosphere. American style Metal Tile has all the advantages of the Spanish style . . . but in some cases, is more suitable to the type of architecture.

MILWAUKEE CORRUGATING CO., MILWAUKEE, WIS.

BRANCHES: CHICAGO, ILL., LA CROSSE, WIS., KANSAS CITY, MO.

EASTERN PLANT: THE ELLER MANUFACTURING CO., CANTON, OHIO

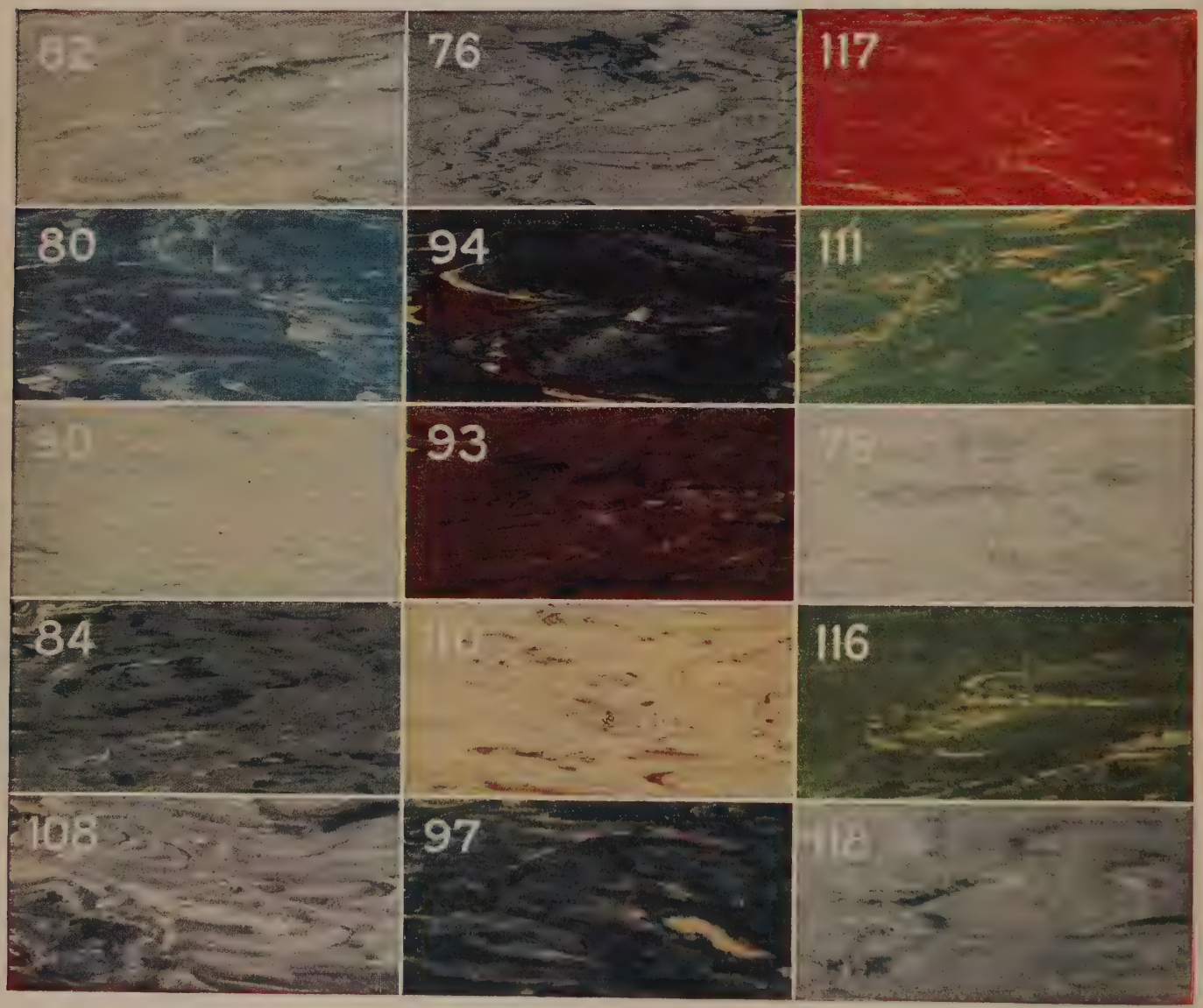
WRIGHT RUBBER TILE

Made by WRIGHT RUBBER PRODUCTS CO.

Dept. H. B. C., Racine, Wis.

Today we have a new era in floors for the home kitchen, sunparlor, bath and other rooms. Pure rubber combined with other wear resistant materials in Wright Rubber Tile offers the utmost of beauty, long life, sanitation—AND greatly increases the resale value.

Many attractive colors are available. Thirty different patterns are shown below. All the colors in Wright Rubber Tile remain bright and new throughout the life of the floor. That means a long time because rubber tile outwears any other material in general use.

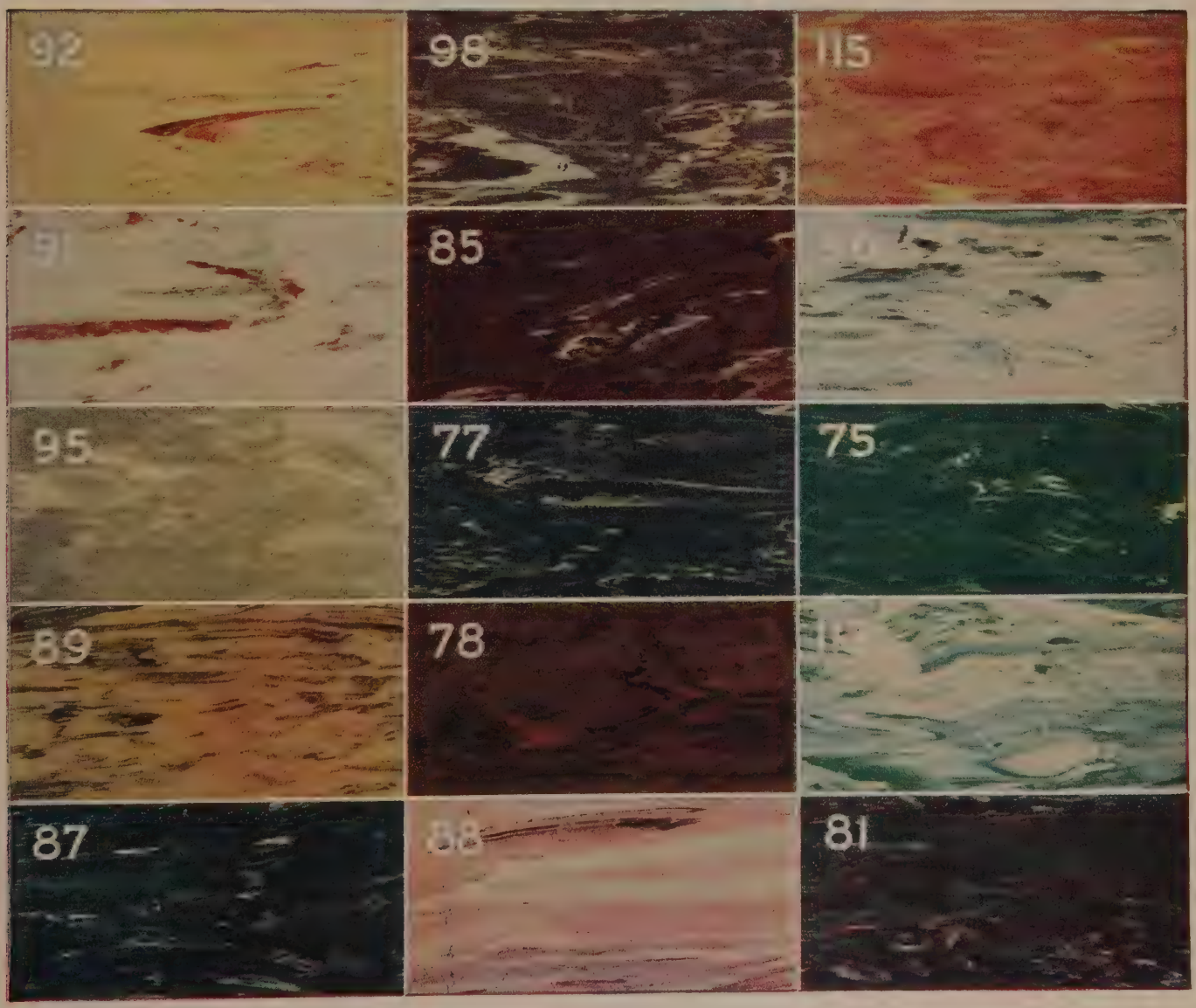


WRIGHT RUBBER PRODUCTS CO., Dept. H. B. C., Racine, Wis.

WRIGHT RUBBER TILE

Builders and home owners have found that this up-to-date floor increases the value of any home. Any good carpenter can lay it in new buildings or over old floors—easier, quicker and at less labor cost than most other materials. This floor makes a house easier to sell for more money.

You can give your customers the many advantages of Wright Rubber Tile without special help. Our book, "The Money Making Possibilities of Wright Rubber Tile in Your Town," gives all details. It points out profits for you. Write for a copy of this book and a color chart today. No cost or obligation.



WRIGHT RUBBER PRODUCTS CO., Dept. H. B. C., Racine, Wis.

W. & J. SLOANE LINOLEUM

Made by W. & J. SLOANE MFG. CO.
TRENTON, N. J.

Sole Selling Agents:
W. & J. Sloane, 577 Fifth Ave., New York

SALES OFFICES AND WAREHOUSES:
BALTIMORE
BOSTON
PHILADELPHIA
DETROIT
ST. LOUIS
CHICAGO
DALLAS
DENVER

SALES OFFICES AND WAREHOUSES:
SAN FRANCISCO
LOS ANGELES
PORTLAND, ORE.
SEATTLE
*CINCINNATI
*HOUSTON
*KANSAS CITY
*WAREHOUSES ONLY

In smart modern patterns such as the one shown here, linoleum floors furnish harmonious color schemes for the up-to-date living room.

Linoleum Floors Attractive To Women

Linoleum floors by Sloane are in keeping with the modern demand for more color in decoration. Color on the floor at once makes an unfurnished house take on the inviting appearance of a home—makes it easy for a woman to see just how her furniture would look in a room. And every woman knows linoleum floors are practical, easy to keep clean and inexpensive to maintain.

If you want comfort—if you want style—if you want color harmony—then linoleum must have a place in the decorative scheme of your home.

Where to Use Linoleum

Bathroom, kitchen, pantry, breakfast nook, sunparlor, laundry, playroom, hall—linoleum has long proven its place in the service rooms of the house. Now new patterns—bright, colorful, appropriate—add prestige to the use of linoleum not only in these rooms, but in the living room, dining room and bedroom as well.

Designed in harmonious and colorful patterns, by real artists, W. & J. Sloane Linoleum is proving its smartness and beauty in every room in the house. The cry of all interior decorators is for harmony in every element in the room. Dark brown floors do not belong with light grey walls, or cream walls, or any but walls of panelled wood, any more than varnished yellow oak blends with gay wallpaper designs. So now we have modern floors of artistically designed linoleums, linoleums that make a color harmony with walls and curtains and upholstery. Your W. & J. Sloane dealer will be glad to show you patterns of this smartly styled linoleum to blend with the furnishings of your own home, and to give help on your home furnishings plan.

A colorful pattern on the floor makes any kitchen much more pleasant to work in. This linoleum in shades of maroon, delft blue and grey does not show soil easily.

How To Get The Best Decorative Effects with Linoleum

Choice of pattern is important. Do not select a large pattern for a small room, or vice versa. A plain linoleum is generally best in a bedroom, as it is the most restful. In choosing linoleums for a room with a figured wall paper it is better to select a plain color or a quiet duo-effect for the floor—except in a hall, where an effect of brightness and welcoming good cheer is obtained by a patterned floor.

With plain walls, or an "oatmeal" paper choose a marked design for the floor. Patterned floors are always best in a dining room, where they are pleasant and colorful, and do not show soil. They are always best in kitchen, bathroom and sunparlor, for the same reason.

Whether plain or patterned lino-

(Continued on next page)

W. & J. SLOANE, 577 Fifth Ave., New York City

The sun room is the place for color—in walls, furniture, and floor. The linoleum shown is in three shades of red, having a tiled effect, and giving a cheerful but not conspicuous note of color to the room.

leum is used, the effect is generally enhanced by using a border, preferably plain. Unusually smart effects are obtained with black borders used with patterned linoleums. The width of the border depends somewhat on the size of the room. Fully competent advice on this subject can be obtained from W. & J. Sloane Linoleum dealers, or directly from our Service Department, mentioned below.

The Importance of Good Laying

The satisfaction of a linoleum floor depends so much on the way it is laid that it is best to employ a professional layer wherever possible. In order to give its fullest service, linoleum should be cemented to the floor.

On account of the shrinking and swelling of wood floor boards, the use of Builder's Deadening Felt before laying linoleum is recommended. The felt laid lengthwise across the boards, but jointed and cemented to the floor with linoleum paste gives the best results.

The linoleum is then cemented to the floor, the strips running parallel with the felt.

In laying linoleum over a smooth cement concrete floor, the use of deadening felt is not essential.

For the benefit of builders and contractors in localities where good laying service cannot be obtained, we have prepared full laying instructions, supplied upon request.

Practical Advantages of Linoleum Floors

1. **Linoleum is resilient to walk on** and easy to keep clean. Made of cork and linseed oil, it has great elasticity, absorbing most of the impact which jars the human system with each step. To women who must take thousands of steps a day, not only in the kitchen, but up and down stairs and all over the house, this means that the more floors that are made of linoleum, the greater buoyancy and freshness and the less weariness they themselves feel at the end of the day.

2. **Linoleum lightens the task of the housewife.** Cleaning reduces itself to waxing, or wiping with a damp mop. Backbreaking scrubbing is not necessary. Well-made, finely grained linoleum is resistent to grease and dirt. Double-waxed at the plant, ready for use the instant it's laid, W. & J. Sloane Linoleum is especially easy to care for.

3. **Linoleum is germ proof.** That's why it is used in hospitals. Good linoleum has a dense, compact body and a smooth surface. It has no cracks to collect dirt, no pores to harbor germs.

(*Continued on next page*)

Jaspe linoleum is certain to make a restful harmony with the color scheme of any bedroom.

W. & J. SLOANE, 577 Fifth Ave., New York City

4. **Linoleum is economical.** Linoleum floors are generally quite low in price in comparison with hard wood and other floorings used in the home. This is particularly true when linoleum is included in the plans of a new house and laid over the sub-floor. But linoleum can be laid satisfactorily over the floor of either wood or concrete, of an older dwelling.

5. **Linoleum is durable.** A floor of good linoleum, well laid, will last for many years without warping, cracking or buckling. It should not require repairs. An inlaid linoleum has the pattern running clear thru to the burlap back and cannot be worn off.

6. **Linoleum is one of the finest insulating materials.** It helps keep out the cold in winter and the heat in summer.

The Cost of Linoleum Floors

While it is impossible to give here any accurate costs of linoleum floors which vary according to grade and distance from the mill, a rough idea can be given.

Including the cost of laying, genuine linoleum floors can be installed at a cost ranging from $1.00 per square yard, or possibly slightly less, to $4.00 or $4.50 per square yard. The former figure would be for a light grade of printed linoleum. The highest figure would be for the heaviest and most expensive grade of marble tile inlaid by the finest method. A very satisfactory installation of a good, long-wearing grade can generally be obtained between a range of $2.50 and $3.50 per square yard.

A colorful and inviting entrance hall. The marbleized pattern of linoleum is particularly suitable.

Kinds of Linoleum Made by W. & J. Sloane Mfg. Company

Inlaid

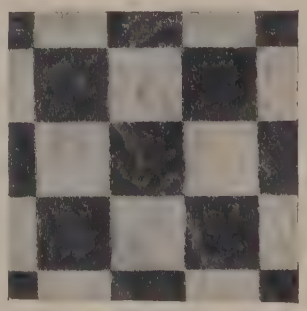
Inlaid linoleum is patterned goods with the colors of the pattern running clear thru to the burlap back. The pattern cannot be worn off. It comes in four varieties:

1. **Marble Tile Inlaid**

Geometric patterns having the appearance of real marble.

2. **Straight Line Inlaids**

Geometric patterns in a plain or mottled effect.



Pattern No. 410
Colors: Green and Cream

3. **Clearline Inlaids,** exclusive with W. & J. Sloane, made by a process which produces a softer and warmer effect than the straight-line inlaids.

4. **Pompeian,** a lighter grade, inexpensive marble tile for homes.

Plain Linoleum

Plain linoleum also has the color running clear thru, but there is no pattern. W. & J. Sloane make plain linoleum in several grades, including Battleship Linoleums, a special type for heavy service. Battleship Linoleum is also made in several gauges in accordance with the standard specifications of the U. S. Navy. Independent laboratory tests show that W. & J. Sloane Battleship Linoleum is far superior to these Government standards.

Plain linoleum also includes Jaspes, a two-toned effect, made in several gauges and also in rugs.

Printed

Printed Linoleum has a plain linoleum base with a pattern in oil paints imbedded into the surface. It is very inexpensive, and with a little care such as varnishing, W. & J. Sloane Printed Linoleum will last many years.

Embossed Printed Linoleum

For the first time in the history of floor coverings, there is a printed linoleum with a raised surface, that gives the effect of tiles set in varying colors of mortar. This process is exclusive with W. & J. Sloane and results in a linoleum that looks like a high-priced inlaid—at less than one-half the cost! Any one who has to buy linoleum at a price will find these sparkling, clear-cut, colorful patterns just right for his rooms.

In addition to these various linoleums W. & J. Sloane also makes a lower priced floor material known as **Felt-Base.**

(*Continued on next page*)

W. & J. SLOANE, 577 Fifth Ave., New York City

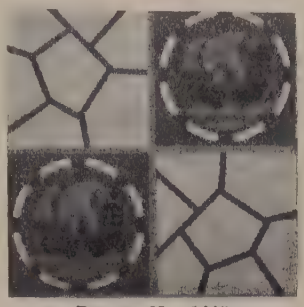
Sloane Patterns

For 85 years the house of W. & J. Sloane has stood for leadership in the quality and style of all types of floor coverings.

The patterns included in the line of W. & J. Sloane Linoleum are all original, authoritative creations of Sloane designers. Their wide range of designs and colorings offers full opportunity for achieving charming interiors.

A few examples, in black and white, are shown on this page. Neither they nor the accompanying photographs, however, do them justice since they convey no impression of the colorings.

A full selection of Sloane patterns, in color, will, however, be sent to any contractor on request.



Pattern No. 1445
Colors: Red, Green, Grey and Black.

Where to Buy W. & J. Sloane Linoleum

W. & J. Sloane Linoleum is sold and laid by leading department stores, furniture stores and linoleum contractors throughout the country. Any Sloane dealer is prepared to assist builders or contractors at any time in choice of patterns, estimating yardage required from plans, supplying estimates of cost, etc.

Special Service to Builders

We maintain a special service department to assist builders and contractors. You can call upon this department to estimate from plans the yardage required, to recommend suitable patterns or grades, or to answer any special inquiries. Write to Home Builders Service Dept., Linoleum Division, W. & J. Sloane, 577 Fifth Avenue, New York City.

Ask For Any of These Service Booklets

Any or all of the following will be sent to you upon request:

1. Pattern Book, showing all patterns in the Sloane line in color.

2. Modern Floors by Sloane—a booklet in color on the decorative uses of linoleum.

3. Laying Instructions—full directions on the proper laying of linoleum.

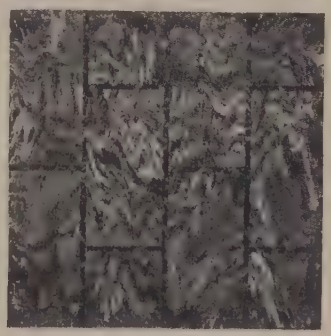
4. Quality Samples—a set of samples of the different grades of linoleum made by Sloane.

Address request to Home Builders Service Department, Linoleum Division, W. & J. Sloane, 577 Fifth Avenue, New York.

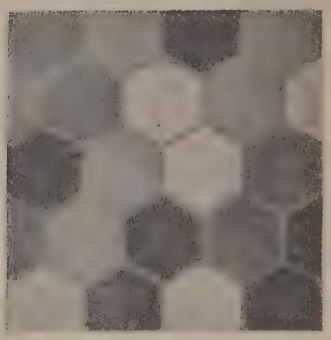
Linoleum is a sanitary floor for the nursery, and a floor that means less work for mother. The colorful ship pattern shown here adds interest to any child's playroom.

Pattern No. 715
Colors: Blue, Grey and Black.

Pattern No. 1035
Colors: Blue, Grey, Rose and Black.



Pattern No. 125
Colors: Rose, Cream and Brown.



Pattern No. 935
Colors: Brown, Green and 2 shades of Tan.

W. & J. SLOANE, 577 Fifth Ave., New York City

CHOOSE MAPLE . . . stain it any color!

Standard finishes manufactured and guaranteed only by The Marietta Paint & Color Co., Marietta, O., and Murphy Varnish Co., Newark, N. J.

Pastel Green
Silver Gray
Early American
Royal Blue
Dove Gray
Spanish Brown
Autumn Brown
Natural
Seal Black
Orchid

Seal Black is like Ebony, and mirror-like in finish. All other stains are clearly transparent, enhancing the natural beauty of Maple.

WHAT MAGIC beauty one sees today in homes floored with Northern Hard Maple! Here—a floor in soft gray. There—a floor in restful blue. A floor in rich, rare ebony . . . another in lovely orchid . . . each in perfect keeping with the color scheme of its room!

They are a new vogue—these enduring Maple floors in color. And any home may have them, at a moderate cost. With special, fadeless penetrating stains which a painter can apply right in the room, it is now possible to produce permanent colors of one's choice in this smooth, resilient hardwood flooring.

Recommend this element of beautiful color in the homes and apartments you plan—and provide in addition, the many other unique advantages which Northern Hard Maple offers. Our book, "The New Color Enchantment in Hard Maple Floors," shows page after page of the newest colorful interiors. May we send you a complimentary copy? Just write us.

MAPLE FLOORING MANUFACTURERS ASSOCIATION
McCormick Building, *Chicago*

Guaranteed Floorings

The letters **MFMA** on Maple, Beech or Birch flooring signify that the flooring is standardized and guaranteed by the Maple Flooring Manufacturers Association, whose members must attain and maintain the highest standards of manufacture and adhere to manufacturing and grading rules which economically conserve these remarkable woods. This trade-mark is for your protection. Look for it on the flooring you use.

MFMA

Side and end matched to perfection—Maple makes a one-piece floor of lasting beauty.

Floor *with* Maple

"IXL" ROCK MAPLE FLOORING

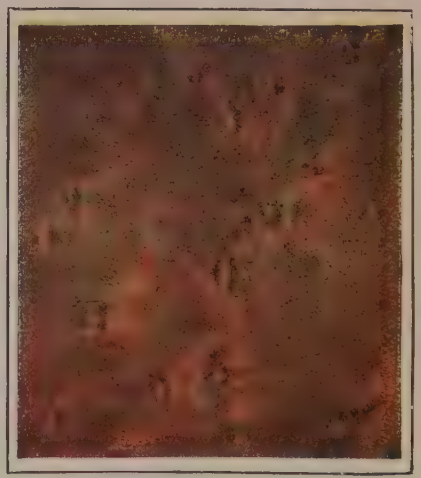
Cinderella of the Floors—The Sunlight Wood

Manufactured by WISCONSIN LAND & LUMBER COMPANY

HERMANSVILLE, MICHIGAN

Flooring Excellence

FOR 40 YEARS



[The Newest Floor Treatment Brings Back a Bit of Yesterday—Tomorrow—]

[One of Eighteen Practical and Beautiful Hard Maple Finishes]

THE FINEST MILLED FLOORING IN THE WORLD

Full Back Construction — Non-Cupping

Water Tight and Wedge Matched—Plus Wonderful New Color Features

Address DIVISION OF PUBLICITY AND SERVICE
and ask for the color book "Revealing the Hidden Beauties of Hard Maple"

WISCONSIN LAND & LUMBER COMPANY, Hermansville, Mich.

*CELLized OAK FLOORING, INC.

MEMPHIS, TENN.

MANUFACTURED BY THE FOLLOWING

E. L. BRUCE COMPANY, Memphis, Tenn.
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TENNESSEE OAK FLOORING CO , Nashville, Tenn.
THE LONG-BELL LUMBER CO., Kansas City, Mo.
BRADLEY LUMBER CO. OF ARKANSAS, Warren, Ark.
NASHVILLE HARDWOOD FLOORING CO., Nashville, Tenn.

*CELLized Oak Floor Products are sold through Lumber Dealers everywhere.

*CELLized TRADE MARK

Oak Floor Blocks—*CELLized:

Style, permanence, and economy are combined in this design oak floor, colorful, rich, distinctive, in entire harmony with whatever furnishings are desired. It suggests the costly parquetry floors of historic edifices of the old world—yet the cost is but little more than the commonly used strip flooring, less than many perishable floor coverings.

Three sizes: 6¾", 9" and 11¼" blocks. All grades.

Oak is pre-eminent for comfort and beauty; it is quiet and easy under foot, conveying a sense of warmth and hospitality. These oak floor blocks, each a complete unit of three or more oak flooring strips, full 13/16" thickness, splined together, are laid in EVERBOND, a plastic cement, without nails, directly over concrete or wood subfloor, as rapidly as regular strip flooring. Squeaking is eliminated, and the floor is comfortable and sound deadening, as EVERBOND is a non-vibrating medium.

Each block is *CELLized, a deep-cell chemical treat, which reduces the tendency to change in size; resulting in a smoother and more perfect hardwood floor. The treat also protects against insect attacks and decay.

Laid by Specialists:

Approved flooring contractors have been licensed in each locality, who are specialists in laying oak floor blocks. When laid by these contractors, the floor is guaranteed by *CELLized Oak Flooring Inc. Names furnished on request.

Increases rental or resale value many times over its finished cost.

Solid Oak Floor Planks—*CELLized:

This historical type floor has been revived, and meets the demand for an unusual and distinctive floor treatment. Its heritage is from all countries when wooden flooring, before the era of modern machinery, had to be cut roughly out of the log.

Expressing the simplicity and dignity of early American floors.

Knots, and other grade "defects" that are out of place in strip flooring are looked for in plank floors. "Cracks" represented by the V-groove, set out each board as a unit, and enhance the appearance. Even slight unevenness is considered an attraction.

Solid plank oak flooring is *CELLized to make it more resistant to moisture conditions than untreated lumber. The process is inexpensive; it adds but little to the cost, but reduces the tendency of solid oak planks to change in shape.

Full 13/16 in. thickness. Five widths, 4, 5, 6, 7, and 8 in. (face measurement), afford ample scope for adjusting the random or equal width styles of laying to any room area. The *CELLizing treatment, impregnating the wood, partly fills the cells, permitting a richer and more lasting finish with less finishing material.

Strip Oak Flooring—*CELLized

The finished beauty of the more commonly used narrow face oak flooring is enhanced by *CELLizing, as the treat tends to harmonize the natural contrasts in the grain of oak. *CELLized strips are more easily and rapidly laid, as the pieces slide together; and because they maintain their original shape, a satisfactory snug fit is obtained. *CELLizing acts as a lubricant and facilitates nailing. All the moisture resistant, insect and decay-preventive advantages of *CELLizing apply to narrow face flooring, as well as to oak blocks and oak floor planks.

The texture and grain of oak cannot be imitated.

Literature:

(1) "Permanent Wood Floors for Modern Buildings and Homes." An architect's data book in convenient form for files, covering completely the use of *CELLized oak floor blocks.

(2) Data Sheet No. 1: Complete specifications and standard instructions for laying *CELLized oak floor blocks.

(3) Data Sheet No. 2: Specifications and instructions for laying *CELLized oak floor planks and *CELLized strip flooring.

(4) "Style in Oak Floors": An illustrated booklet on *CELLized flooring addressed to prospective home builders. See our catalog in Sweet's, 23rd Edition.

***CELLized OAK FLOORING, INC., Memphis, Tenn.**

RITTER APPALACHIAN OAK FLOORING

Manufactured by W. M. RITTER LUMBER COMPANY

America's Largest Producer of Appalachian Hardwood Lumber

General Offices: 115 E. Rich Street, COLUMBUS, OHIO

RITTER Appalachian Oak Flooring is used in the better types of residences and public buildings. It lends distinction to any room because of the beauty of its grain and texture. The outstanding advantages are:

Finer Quality

Its quality is seen at a glance. The uniformity of color in oak depends upon the number of species of oak involved. The fewer the species, the finer the coloring effect. RITTER Appalachian White Oak is produced from only two species, while RITTER Appalachian Red Oak is confined to three.

All RITTER Appalachian Oak Flooring is made from Oak grown in the Appalachian Mountains under ideal conditions of climate, soil and drainage. These conditions produce a fine grain, even texture and uniform color. Because of these qualities, the workmen are enabled to lay and scrape it with ease and economy in such a way as to give, when finished, a smooth uniform appearance, free of irregularities and pleasing to the eye.

Greater Beauty

RITTER Appalachian Oak Flooring, embodying all the qualities desired in Oak Flooring, gives charm and elegance to the home. Many architects and builders have discovered that the effects desired in treatment, finish and resultant beauty in final appearance, can be more successfully obtained by using RITTER Appalachian Oak than in any other way. RITTER Appalachian Oak Flooring is not only made from the finest of timber, properly seasoned and manufactured, but in addition it is stored in warm rooms from the time it is manufactured until it is shipped to its final destination, thus assuring to its users the maximum of satisfaction.

Reasons for the Greater Beauty of Ritter Flooring

Floor beauty is largely a matter of timber growth. Granted that the flooring is well manufactured, properly handled, and well laid, the charm of the completed floor goes back to the forests in which the timber originates.

How appropriate the timber is depends principally on where it was grown. Oak grown in low, swampy areas, although suitable for many purposes, is usually of coarse, flashy grain and uneven texture, due to fast growth and the resultant wide growth rings. Such oak is not adapted to the production of flooring of the same character of beauty as highland oak of fine, subdued grain and uniform texture.

Highland oak, particularly that from the Appalachian Region, on the other hand, possesses fine grain, close, even texture and more uniform color—qualities so essential to the truly beautiful floor. These characteristics are due to slow growth in the elevated and well drained areas of the Appalachian mountains, where there is an abundance of oxygen and nitrogen, where the tree roots are well aerated, all resulting in the comparatively thin cell wall found in oak of desirable texture.

Economy

The slight additional initial cost of RITTER Appalachian Oak is far more than made up through the economy in laying, scraping and finishing, in the greater satisfaction to the home-owner in the finished floor and in the increased re-sale value of the home in which RITTER Appalachian Oak is used.

For Every Requirement

RITTER Oak Flooring can be laid in any one of three patterns: strip, block or herringbone, according to individual taste. These patterns are made in the standard grades and sizes. The block and herringbone patterns can be had only in $\frac{13}{16}$" thickness, but the strip pattern is manufactured in both $\frac{3}{8}$ and $\frac{13}{16}$" thickness. No matter what the requirement, there is a grade of RITTER Flooring to care for it. Each possesses the same fundamental qualities that have made "Ritter Brand" the acknowledged superior in the oak flooring field.

Remember

In the standard rules for grading Oak Flooring consideration is given to such imperfections as knots, worm holes, sap, splits and similar defects, but no consideration is given to grain, texture or color; therefore, to be assured of beautiful Oak floors, it is necessary, in addition to specifying the grade desired, to specify also that the flooring ordered must be manufactured from Appalachian Oak. The easiest and surest way of securing a satisfactorily finished floor is to insist on RITTER Appalachian Oak Flooring.

In order to enable the purchaser to know he is getting RITTER flooring, every piece is branded on the back: "W. M. Ritter Lbr. Co."

Ritter Appalachian Oak Flooring in the home of Mr. Frank B. Putt, Rydal, Pa. Architect, Carl Ziegler, Philadelphia.

The panel of flooring above illustrates the grain and uniform texture of Ritter Oak Flooring.

Brown's SUPERCEDAR Closet Lining

Manufactured by GEORGE C. BROWN & CO.

MEMPHIS, TENN.

Largest Manufacturers of Tennessee Aromatic Red Cedar in the World

Supercedar is the trade marked name of the closet lining made by George C. Brown & Co., Memphis, Tenn., world's largest producer of aromatic red cedar. It is a superior product, 90 per cent or more red heart, scientifically cured, and rigidly inspected during manufacture. It is tongue-and-grooved, end matched, and sealed immediately in double face fibre board cartons against deterioration or damage in shipping.

Cost: Supercedar, with its superiorities and many advantages, costs no more than ordinary cedar closet lining.

Lumber Dealers and builders' supply houses in nearly every community in the United States have Supercedar in stock or can get it quickly from warehouse stocks located in various sections of the country.

The Aroma of Supercedar, so pleasant to humans, is deadly to moths. A closet properly lined with Supercedar and having a well fitting door will suffocate the moth or its larvae. The aroma comes from the oil in the wood, but the oil is only found in the red heartwood, that is the reason why Brown's Supercedar is more desirable than ordinary cedar . . . it is 90 per cent or more red heart. Tennessee Aromatic Red Cedar trees, logs or lumber contain much sap, or what is known as white wood. This white wood has no value as a moth deterrent. It contains no oil and gives off no aroma.

In New Homes closets are first plastered or lined with wallboard. Lining may be nailed direct to studding in closet wall, ceiling and inside of door providing closet is first lined with heavy building paper and all openings below floor or above ceiling of room are closed. Use 13/16" Supercedar Flooring. Do not varnish or paint Supercedar. The end joints need not come over the studding because end matching insures tight joints. Use of Supercedar Quarter Round insures tight corners and a finished appearance.

Remodeling Work: Homes and apartments without moth proof closets can be modernized quickly, easily and cheaply with Supercedar. Simply apply Supercedar over the plaster walls and ceiling. Line the door also. There being a good, solid floor, the 3/8-inch Supercedar Closet Lining can be laid as a new floor. The cost will be reasonable.

. . . . . Houses and apartments with Supercedar closets have greater appeal to both buyer and renter.

None genuine without this trade mark on each package.

Maximum Protection: Bear in mind that the aroma of Supercedar stifles the moth. For that reason the closet door should be weatherstripped unless it is an extra snug-fitting door. The inside of the door should be lined with Supercedar Closet Lining and floor covered with 13/16" Supercedar Flooring. The lining in its natural state is effective; if varnished or painted it cannot give off the aroma. Clothing and other articles should be aired and cleaned before storing. All members of the family should be warned to keep the closet door closed.

This Package reduces the final cost of Brown's Supercedar Closet Lining by protecting contents against loss or damage in shipping or while in dealer's warehouse.

Brown's Supercedar Closet Lining Is 3/8" Thick

Packages sealed at George C. Brown and Company's mills contain following quantities: **"Package of 1½" face, 64 ft.; 2" face, 60 ft.; 2¼" face, 44 ft.; 2½" face, 48 ft.; 3" face, 60 ft.; 3¼" face, 64 ft.; 3½" face, 34 ft.; 4" face, 38 ft.; 4¼" face, 40 ft."**

Sizes and contents plainly marked on each carton. Registered trademark "SUPERCEDAR" and Brown's guarantee will also be found on each package of the genuine.

How to Estimate Quantity Required for Any Job: "Supercedar is measured same as Oak flooring. To arrive at the required amount, add to the square feet of the surface to be covered the following percentages: If 1½" face, add 33⅓%; if 2" face, add 25%; if 2¼" face, add 22%; if 2½" face, add 20%; if 3" face, add 25%; if 3¼" face, add 23%; if 4" face, add 19%; if 4¼" face, add 17%."

"Supercedar Quarter Round: Used in all corners adds a finished appearance to the closet and helps make it tight and more efficient. Can be secured in boxes of 200 lineal feet each."

"Supercedar Shelving: Adds to the beauty as well as efficiency of a Supercedar Closet. This shelving which is produced from solid Red Heartwood Cedar can be secured in 8 ft. lengths. Standard widths are 8", 9", 10" and 11". Wider shelves can be made by using double widths."

"Build A Supercedar Storage Closet In The Attic: We will furnish, without charge, blue print and list of materials to build convenient storage closets. Sizes 4' x 4' x 7' or 3½' x 6' x 8'."

This Guarantee on Package: "Brown's SUPERCEDAR Closet Lining is manufactured exclusively from Juniper Virginiana, the aromatic Red Cedar of the Southern States, famous for its pleasing, fragrant aroma and used more than fifty years in the making of Moth-Proof Cedar Chests.

"Beginning with the selected Juniper tree, chosen by the special favor of nature to contain the wonderful Oil-of-Cedarwood (making it impervious to decay) the process of manufacture of Brown's SUPERCEDAR Closet Lining makes certain that all the aroma so deadly to moths is retained in the finished product.

GEORGE C. BROWN & CO., Memphis, Tenn.

Louisiana Red Cypress, "The Wood Eternal"

Manufactured by the Member Mills of the

LOUISIANA RED CYPRESS BUREAU

513 Carondelet Street, New Orleans, Louisiana

PRODUCTS

Louisiana Red Cypress Lumber, Lath and Shingles.

Guaranty of Quality

Builders can make certain of getting the genuine "Wood Eternal" by clearly specifying: Louisiana Red Cypress, manufactured by a mill which is a member of the Louisiana Red Cypress Bureau. This carries assurance of responsible manufacture, proper seasoning, accurate grading, full standard sizes and quality stock.

Region of Growth

Louisiana Red Cypress grows in the swamplands of lower Louisiana, and is commercially known as "Tidewater" Cypress, as distinguished from "inland" or "upland" cypress, which does not possess the characteristic qualities of Louisiana Red Cypress to any desirable degree.

Properties

Louisiana Red Cypress varies in color from slightly reddish to deeper red, and to almost black. The sap-wood is a much lighter shade than the heartwood; and some grades are vari-colored, being marked by contrasting color zones.

In strength, as in weight, Louisiana Red Cypress lies intermediate between the heavy and light pines. It is easy to work and finish; and is free from splitting or warping when properly dried. It has relatively few defects and yields a high percentage of flawless timbers or boards.

Durability

Louisiana Red Cypress, containing a natural preservative, is one of the most durable of American woods. This applies specifically to the heartwood, consequently heart grades should be used where resistance to decay is required, as in contact with the soil or when exposed to moist, humid and certain acid conditions; also in woodwork, left to weather in its natural color.

All over the country, on the farms and in the cities, are to be found structures that stand as mute testimony to the durability of "The Wood Eternal." There are houses in Louisiana, built of Red Cypress more than a century ago, which are still in good condition and are sheltering the descendants of their builders—even to the fifth and sixth generation.

When the Acadians were exiled from Nova Scotia more than two hundred years ago, and were brought to South Louisiana (the Land of Evangeline) they built their homes "of timber hewn from the Cypress tree" and covered them with Cypress shingles, hewn by hand. And in far-away New England, men soon came to prize Red Cypress. Many a roof covered with, or building constructed of, this "Wood Eternal" has withstood the weather decade after decade.

Ancestral home of the Parlange family in Pointe Coupee Parish, La., built in 1788 by Marquis Ternant. Native red cypress employed inside and outside, from sill to peak. Still used as residence after six generations of service.

Exterior Construction

Louisiana Red Cypress is pre-eminently fitted for use as siding, porch flooring, stepping, cornices, door and window frames—pergolas, trellises and arbors—tanks, well curbing, silos, fencing, barns and farm buildings generally. It is the standard material for good greenhouses and equipment; the heart grades are recommended for the entire framework, millwork and siding, also for tubs and boxes. The heart grade of Louisiana Red Cypress is widely used as seating and siding for stadia, grandstands and ball parks. "Pecky" Cypress excels for attaining rustic effects, as in park seats and lawn furniture.

"Pecky" Cypress is ideal for greenhouse benches, coldframe sides, and compost boxes.

Dining room of the old Parlange house, shown in preceding illustration. All woodwork, including doors, casings, mantle, floors, cornice and ceiling is of red cypress cut from the swamps on the estate nearly 150 years ago.

Painting

Louisiana Red Cypress takes and holds paint perfectly, and requires no special preparation of the surface. It resists the weather well and shows no surface discoloration.

Interior Woodwork

Louisiana Red Cypress is a valuable wood for interior trim, doors and paneling. It has a finely figured but comparatively straight grain; is easy to work and available in clear, wide size boards. It takes stains well and gives fine effects in natural finish. Since it is free from resinous substances, it makes an excellent base for enamel or flat paint. It does not appreciably warp or shrink when properly dried.

In large panels, as for doors or wainscots, it is distinctive either in natural finish or under popular imitative stains.

"Pecky" Cypress is much in vogue for interior woodwork in picturesque homes where antique effects are desired.

Grades

For inside work, the "A" Grade of Louisiana Red Cypress is recommended for select natural finish; the "B" and "C" Grades are recommended for enamel and flat paint work.

For exterior purposes, the Clear Heart Grade gives the finest results, as it will stand the severest exposure, besides taking and holding paint beautifully. But for the general run of outside painted work, one may choose in descending scale of quality and price among the grades "A" "B" "C" and "D" according to the character of the job.

Shingles

Louisiana RED Cypress Shingles, both sawn and hand rived, give superior service, besides being thicker and heavier than most other wood shingles. They are manufactured in dimension widths.

Lath

Louisiana Red Cypress lath run sound in quality, are easy to apply, have good nail holding power and properly dried, show no shrinkage or warping. Being non-resinous, they do not discolor plastered walls.

Information

Builders who have special problems in construction are invited to write us for additional information on the use of "The Wood Eternal" for their particular requirements.

LOUISIANA RED CYPRESS BUREAU, 513 Carondelet St., New Orleans, La.

A WOOD THAT FIGHTS ITS OWN BATTLES

The oldest frame house in the oldest American settlement. Unpainted, this cypress house at St. Augustine, Florida, is still in good condition, after 250 years.

Durable Tidewater Red Cypress was used in the construction of this lodge on the Vincent Astor estate at Port Washington, Long Island. Aymar Embury II was the architect.

YOU can rely on Tidewater Red Cypress to resist rain and rot for many generations. Paint is desirable, of course, where you want the charming effect that only a painted wood surface can yield. But exposure of cypress to weather need never concern you.

Because of its freedom from repair bills, its moderate initial cost, and its low upkeep cost, this is the most economical lumber you can employ.

Because of its beautiful grain, its smoothness of finish, and its resistance to warping, Tidewater Red Cypress is the most beautiful lumber you can use—inside or outside.

Surely you will want your home to be one of enduring beauty. Surely you will want to maintain it economically. Surely, then, you will want to build with this Wood Eternal.

But when you order, ask for the Product of the Gulf Red Cypress Company and you will be sure of getting the utmost in beauty and durability.

Gulf Red Cypress Company

Jacksonville, Florida

Sales Agents in Principal Cities

Inland Empire Lumber, Lath and Woodwork

WESTERN PINE MANUFACTURERS ASSOCIATION

510 Yeon Building, Portland, Oregon

Members' Sales Offices in Principal Distributing Centers of the East and Middle West

Pondosa Pine

The Pick o'the Pines

Products:

Members manufacture Pondosa Pine and Idaho (Genuine) White Pine Select and Common Lumber, Stock (or Special) Mouldings, Trim, Siding, Window Frames, Plaster Lath and Factory Lumber for Sash and Doors.

Smooth-wearing Larch Flooring, Lumber and Small Timbers.

Sold By:

Local lumber dealers and millwork firms carrying well-assorted stocks for immediate shipment.

Grades and Sizes:

Pondosa Pine and Idaho White Pine are finishing woods, primarily. Larch is the structural wood of the Inland Empire. Larch Dimension comes in three grades—Nos. 1, 2 and 3 Dim. In the Pines, Select lumber is divided into three grades—B&Btr., C and D Sel.; Common lumber, closely sorted by widths and lengths as well as by grades, is segregated into five grades—Nos. 1, 2, 3, 4 and 5 Com. Association standard patterns and standard manufactured sizes as approved to conform to American Lumber Standards, and descriptions of the grades for all Inland Empire species are contained in the Association's Grading Rule Book, a copy of which will be furnished upon request.

Pondosa Pine:

Pondosa is the common name applied to the tree species *Pinus ponderosa*. This soft-textured pine reaches a high degree of perfection in the Inland Empire of Washington, Oregon, Idaho and Montana. Soil, altitude and climatic conditions combine to produce in this tree, wood of unusually soft texture and even grain. Its lumber more nearly resembles White Pine (*Pinus strobus*) than does any other species that is not botanically a genuine white pine, and because of this similarity it is used satisfactorily and can be specified without hesitation for the same carpentry items, with the exception of finish flooring and framing material in residence, apartment, theater, office, store, industrial and farm building construction.

In the twenty-five years Pondosa Pine has been available in quantity, manufacturers of standardized woodwork, after years of experimentation with all species of wood, continue to use Pondosa in producing the bulk of the stock sash and doors made in the United States because it fulfills the requirements best.

Pondosa is readily workable, cuts smoothly with or against the grain, stays put, shows no tendency to split, is light to handle, is not a resinous wood and is light in color, providing a perfect base for paints and enamels, without grain raising, covers with fewer coats and requires fewer repaintings than most woods. Its smooth, lustrous surface and delicately figured grain add to its beauty under all types of finishing treatment of interiors. Because of its low-density cell structure, the thermal conductivity of Pondosa is much lower than the average for wood, whose high insulating value is well known. In all items, including also plaster lath and furring strips, the use of Pondosa will permit lower labor costs, without impairing the quality of the work done. If accorded normal care and protection, a well constructed installation of trade-marked Pondosa Pine will last the life of the building in which it is used. Pondosa has been placed with satisfaction, under a wide range of climatic conditions, in thousands of buildings over a period of twenty-five years and longer. And instances of over sixty years of useful service are on record at the Association offices.

Idaho (Genuine) White Pine:

This species, known botanically as *Pinus monticola*, occurs in largest volume in the panhandle of northern Idaho and bordering territory. It is one of three (Northern White Pine, Sugar Pine and Idaho White Pine) of the Genuine White Pines of commercial importance in the United States. It is smaller than Sugar Pine on the average and more like Northern White Pine, and though it produces all grades of lumber the wood stands out most distinctively because of its high percentage of small, tight knotted Common lumber such as is needed for knotty pine paneled interior walls in offices and residences. It has been used extensively for this purpose and for all exterior woodwork including siding, cornice, porch and entrance details. A particular feature about Idaho White Pine and Pondosa Pine is that although in some grades the boards may contain knots, the grain is not torn out around them and they will paint over completely, and are not inclined to crack open or exude resin or acids to discolor the paint or cause it to peel.

The advantages mentioned for Pondosa apply to Idaho White Pine in even greater degree. The latter material is identical with Northern White Pine and individual pieces of the two woods oftentimes cannot be told apart by expert wood technologists. An appreciation of its value may be drawn from the fact that it has first call for intricate foundry patterns and other similar exacting work. Its straight grain and lack of hard and soft streaks have made it the match wood of America.

The uses given for Pondosa apply also for Idaho White Pine except that because of a lesser production of factory lumber in Idaho White Pine, Pondosa is used almost exclusively for all stock sash and doors, while Idaho White Pine is used more for special or made-to-order millwork items. Idaho White Pine is also well suited for turned work, as balustrades and other stair parts, and for carved woodwork.

Larch:

Larch (or *Larix occidentalis*), occurring in Montana and other parts of the Inland Empire, in many respects resembles cypress. Its wood is of a dark russet or chocolate brown color, of rather conspicuous grain, and is impregnated with natural preservative oils which cause the wood without aid of protective coatings to offer remarkable resistance against decay when placed in contact with the soil or in other intermittently moist surroundings. Larch is of moderate weight, unusually strong and stiff for its weight and moderately hard in texture. Because of these properties it should be specified for house, store and farm building framing, for house and factory flooring, and for finishing work calling for stained or oiled and waxed treatment. It lends itself to rustic effects as through use in shore or mountain week-end cottages. Edge-grained Larch floors, due to the fine, even grain and tightly knit fibers, show no tendency to sliver or scuff under ordinary abrasive wear.

Identified Lumber and What It Means:

At the left of the preceding captions is illustrated the mark by which each species may be positively identified by an inexperienced lumber buyer. The mark denoting the species is imprinted on the end grain of a board. Under restricted use this registered trade mark of Pondosa Pine, for example, is to be found only on boards manufactured by a member of the Western Pine Manufacturers Association. This fact protects the purchaser against lumber of uncertain quality and assures him that the stock has been rigidly graded only by lumber graders of certified ability, whose work is supervised and checked monthly by a corps of trained Association inspectors; and further, that the purchaser can confidently buy this trade-marked lumber knowing also that it has been thoroughly seasoned, smoothly milled to standard sizes *after* drying, and carefully loaded and handled through the entire manufacturing and shipping operation in a manner in keeping with a quality article. In other words, the mark on the end of a board means that the manufacturer and the Association guarantee the product to be as represented.

Specifications:

Short form specifications, covering house construction, will be supplied free upon application.

Supply and Distribution:

Millions of feet of lumber produced by Association mills are carried in stock in the mill yards and sheds, ready for immediate shipment. Well assorted stocks are also found in the yards of local lumber dealers.

Co-operative Service:

The Association assists architects, carpenters, contractors in matters pertaining to use of its woods. Samples, descriptive literature, supplied free. Research laboratory available for investigating special problems. Association membership list may be obtained by writing the Western Pine Manufacturers Association, 510 Yeon Building, Portland, Oregon.

Idaho
GENUINE
White Pine
THE PINE WITHOUT A PEER

WESTERN PINE MFRS. ASSN, 510 Yeon Building, Portland, Oregon

ANDERSEN STANDARD WHITE PINE WINDOW FRAMES

Manufactured by ANDERSEN FRAME CORPORATION

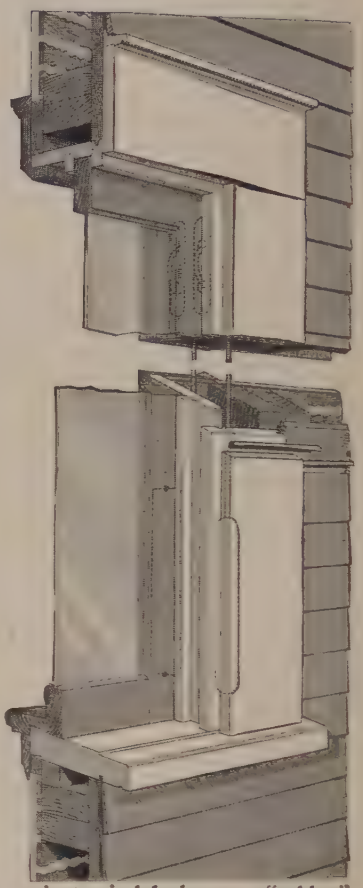
(*Formerly* ANDERSEN LUMBER COMPANY)

BAYPORT, MINNESOTA

Products:

ANDERSEN FRAMES—Standard White Pine Frames for double hung and casement windows, outside doors, and cellar sash.

Andersen FRAMES



Weatherproof and Watertight:

Andersen Frames insure home comfort because they are weatherproof and watertight. They last a lifetime and they prevent wind, dust, or water leakage. Exclusive features (several of them patented) guarantee window frame satisfaction to contractors and home owners.

Andersen Frames are the product of over twenty years' specialized experience. Approximately 8,000,000 Andersen Frames are now in use.

Enduring Materials:

All Andersen Sills and Casings, the parts most exposed to the weather, are of Genuine Soft White Pine. This wood does not warp, swell, shrink or crack. It takes nails and holds paint better than any other wood. It gives long life and permanent accuracy to Andersen Frames.

Pulley stiles which are not exposed to the weather but are subject to frictional wear of sash operation, are made of Pondosa Pine, a harder wood fiber.

Door frame sills are available in either Genuine White Pine or select White Oak.

The finished frame stock is virtually clear and contains no defects marring the durability or appearance.

Noiseless Wearproof Pulleys:

A special feature of Andersen Frames for double hung windows is the patented pulley which is guaranteed to operate noiselessly for the life of the building. A laboratory test equal to 100 years sash operation proved this pulley to be absolutely noiseless and wear-proof.

Accurate Construction:

Smooth milling and accurate construction is secured by special machines and expert workmen constantly producing the same standard article.

As far as practical, all frame parts are assembled at the mill. Pockets are cut, broken out and refastened with screws, pulleys are screwed in place; parting beads and blind stops are nailed in position.

"A Frame Up in Ten Minutes":

All parts fit exactly. No trimming or refitting is necessary on the job. Each frame is shipped knocked down, in two bundles. There are only seven units. No loose or frail parts are packed to become lost or broken. Dealers furnish Andersen Frames either assembled or K. D. in bundles.

It only takes ten minutes for one man to completely erect an Andersen Frame.

Available at Lumber Dealers:

Andersen Frames are available at lumber and millwork dealers. Write for the name of your nearest Andersen dealer.

Complete architectural and construction details will be sent to contractors and architects upon request.

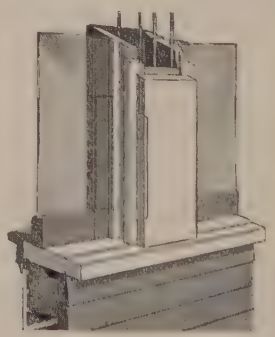
Andersen Weather-tight Features:

The drawing at the right shows a section of a window frame placed in a wall in such a way that there is no opportunity for air, dust or water leakage. This is made possible by the following weather-tight features of Andersen Frames.

1. Air leakage under the casing is stopped by a "wide blind stop" which is formed by a piece of ordinary 4″ tongued flooring inserted in the patented groove in the back of the Andersen jamb.

2. Under the sill, a deep "plough" receives the siding to stop wind-driven air and water at this point. For masonry construction, a caulking groove is provided.

3. As an extra precaution against wind leakage, a "rabbet" is provided in Andersen jambs and sills to receive an inside ground casing. This also holds the frame solidly in place.



The Andersen Weather-tight Mullion:

This section of an Andersen mullion shows how a double-tongued filler piece is fitted in the patented grooves in the back of the jambs, forming a continuous blind stop back of the casing. A piece of insulating material may be placed in the air space between blind stop and casing to give added weather-tightness.

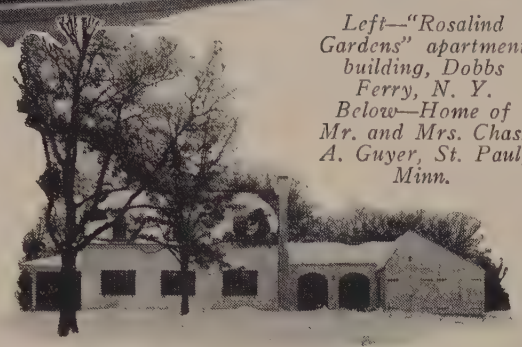
Ask Your Dealer or Send for Your Copy of This Booklet "HOW TO MAKE YOUR NEW HOME MORE COMFORTABLE"

ANDERSEN FRAME CORPORATION, Bayport, Minnesota

Architects and builders find that Andersen Frames meet every requirement of good design and weather-tight construction. They are adaptable to all styles of architecture and types of construction. They have many patented features which make weather-tight installation easy and economical.

TRADE MARK REG. WINDOW and DOOR Andersen FRAMES

Genuine White Pine Sills and Casings



Left—"Rosalind Gardens" apartment building, Dobbs Ferry, N. Y. Below—Home of Mr. and Mrs. Chas. A. Guyer, St. Paul, Minn.

5 POINTS OF SUPERIORITY OF ANDERSEN FRAMES

1. Permanence—
Genuine, Soft, White Pine is used for the exposed parts of every Andersen Frame. This wonderful wood does not check or rot and will last a lifetime. No replacements are necessary. A reasonable first cost includes up-keep and insures *permanence.*

2. Home Comfort—
Absolutely accurate construction; patented features to allow easy and economical use of wide blind stops; patented noiseless, easy running pulleys all help to make Andersen Frames insure *Home Comfort.*

3. Beauty—
Carefully proportioned, easily adapted to any designer's wishes—wide and narrow casings of genuine white pine to take paint smoothly—these qualities of Andersen Frames insure building Beauty.

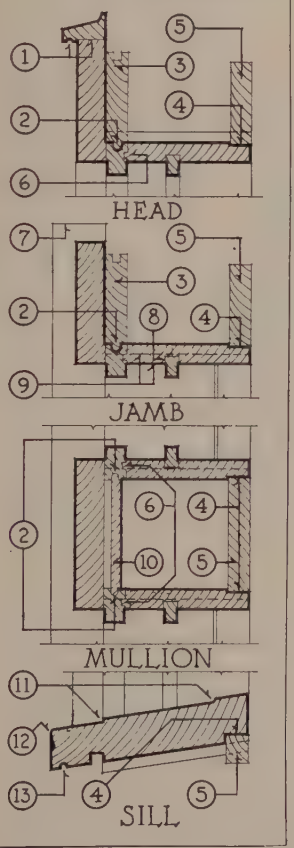
4. Convenience—
Andersen Frames, handled nationally by leading jobbers and lumber dealers, are so distributed as to be available to builders everywhere for *Convenience.*

5. Economy—
Standardized and specialized manufacture, quantity buying and production make it possible to market Andersen Frames at a reasonable price, and, through them, to insure both contractor and home owner real Economy.

Special Features of Andersen Frames

that help builders gain a reputation for good construction

Double Hung Window Frames For Frame Construction



Andersen Frames embody many features that builders have requested. In addition to the fine material, excellent milling, accurate construction and the noiseless pulley, they have many special features, which are listed below.

Andersen Casement Frames also have most of these features. Andersen Frames do not become sprung under stress. As moisture condenses very little on wood, rust does not appear to stain draperies. And most important, air infiltration is prevented by the Andersen weather-tight features.

1. Rabbet and water drip in head casing cap prevent water leakage.

2. Groove (patented) to receive **(3)** a piece of stock matched lumber forming a wide blind stop to prevent air leakage.

4. Rabbet to receive **(5)** an inside ground casing to prevent air leakage. Or this rabbet forms a shoulder for lath or wall board.

6. Jamb is tongued into blind stop to prevent air and water leakage.

7. Sill ends are trimmed and smooth cut.

8. Groove for parting stop is shallower than dado for sill **(9)** to prevent water leakage.

10. Double tongued filler piece is furnished to make continuous blind stop. Mullion jambs are dadoed into full length sill and head jamb.

11. Shoulders on sill prevent air and water leakage under lower sash and storm sash.

12. Front edge of sill is rounded to prevent slivering and denting.

13. Water drip groove under sill.

14. Rabbet to receive **(15)** a wind stop. This is especially desirable when used with steel lintels.

16. Extra heavy (1-3/8") head jamb.

17. Rabbet for flush plaster in 8" wall construction. Allows use of narrow standard trim.

18. Blind stop hollow-backed for sash weight.

19. Rabbeted water drip groove provides a caulking rabbet for elastic cement if desired.

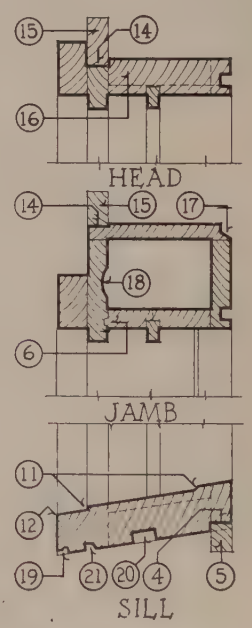
20. Mortar caulking groove assists in preventing air leakage under sill.

21. Slot for water bar.

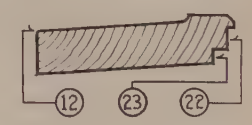
22. Rabbet for finished flooring.

23. Rabbet for rough flooring.

Double Hung Window Frames For Masonry Construction



Oak Threshold Door Sill

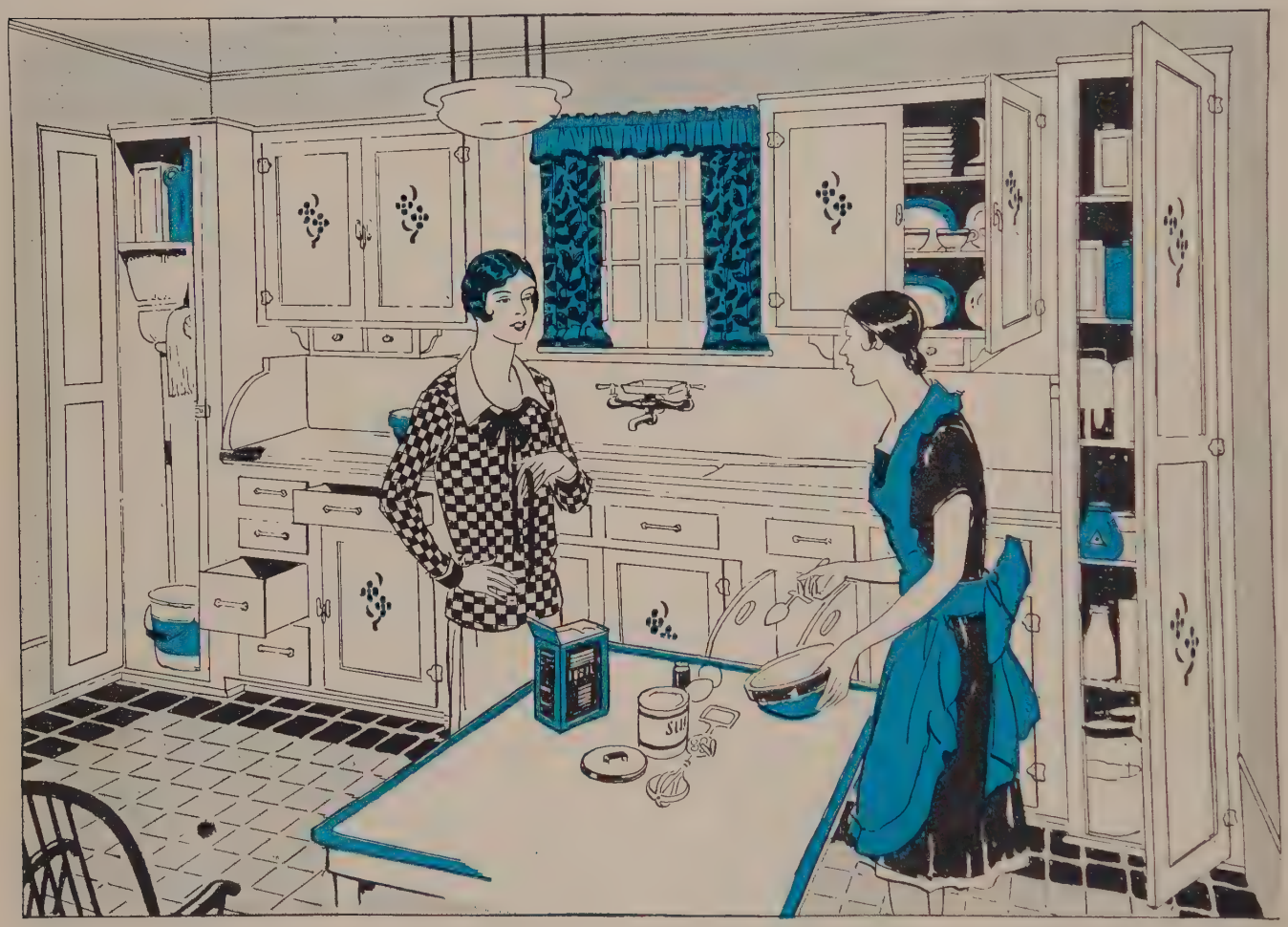


ANDERSEN FRAME CORPORATION, Bayport, Minnesota

For the Home or Apartment

IDEAL *Built-In* FURNITURE

adds to the joy of living—and brings new economies in home construction

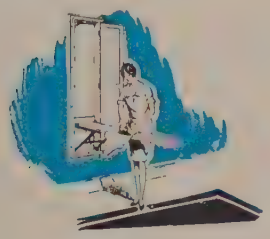


The *New* Flawless Kitchen by IDEAL

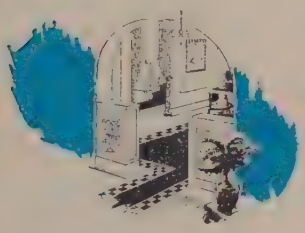
THE new FLAWLESS KITCHEN by IDEAL may be installed in any room, regardless of the number of openings, size or arrangement. It may be utilized for remodeling the old home of the spacious kitchen type or for installation in the small modern efficiency apartment. It is composed of a number of sectional units of varying widths and permits a complete modern kitchen arrangement for any sized room. For complete particulars write for our new book, "*Build* the Beauty *In*."

IDEAL *Built-In* FURNITURE

IDEAL Phone-a-Desk W-942. For living room or milady's boudoir. A personal desk and a handy place for the 'phone. Price $10.75.

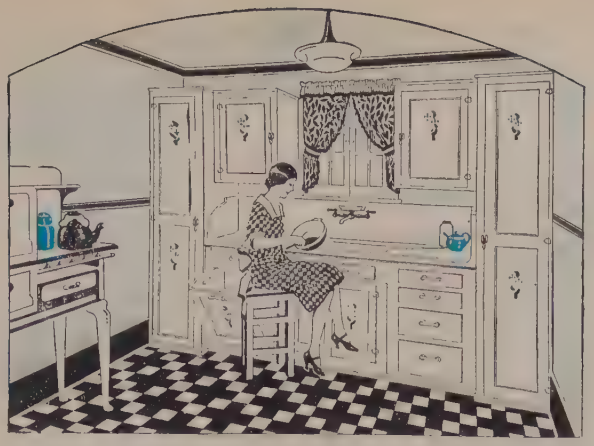


IDEAL Surface Type Ironing Board W-907 can be applied to any wall without cutting an opening. Positive dependable action. Complete with hardware. Price $8.50.



IDEAL Buttress Cabinet. The cabinet of a thousand uses. Comes in six elevations. Shelves adjustable. Excellent for books, china, dental or surgical instruments. Price complete from $14.00 to $16.10.

IDEAL Phone Cabinet W-943. An exceptionally beautiful and gracefully proportioned 'phone cabinet. Price $9.10.



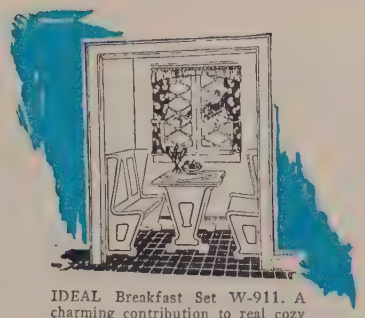
This is a group of units to make a FLAWLESS Kitchen for the small room. As shown above it is 9½ feet long, with ample drainboard space, sink and cabinet space. By leaving off Service Cabinet at the right and Broom Cabinet at the left it may be shortened to 6½ feet. It can be even further shortened to meet requirements.

IDEAL *Built-In* Furniture

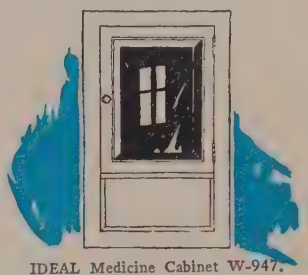
There is not a room in the home that cannot be increased in charm and convenience through the use of IDEAL *Built-In* Furniture. These units are smartly modern in appearance, are designed to give a wide diversity of usage and are of a character of workmanship to be found only in the most expensive portable furniture. You may be advised that a similar character of built-in furniture may be built on-the-job out of plain lumber. A slight duplication of appearance may be possible—but not the quality, material, workmanship, for such cabinet work is not possible to obtain at anywhere near the price asked for standardized IDEAL *Built-In* Furniture. Tremendous volume permits us to offer you such outstanding value. IDEAL *Built-In* Furniture is sold by progressive lumber dealers in most cities. If not available in your community, please write us direct, sending us the name of the lumber dealer from whom you prefer to purchase.

Distributors: IDEAL *Built-In* Furniture is distributed through recognized Sash, Door and Mill Work Jobbers. There are a few territories yet available. Please write us direct for distributor information and new catalog.

This beautifully illustrated book should be in the hands of every prospective home or apartment builder. It attractively illustrates the diversified use of IDEAL *Built-In* Furniture, showing room settings as well as picturing each unit separately.



IDEAL Breakfast Set W-911. A charming contribution to real cozy comfort. Price $22.25.



IDEAL Medicine Cabinet W-947. The most convenient and attractive of all bathroom accessories. Price $7.25.

IDEAL Ironing Board W-909. An exclusive patented feature. The delight of every home manager. Price $8.50.

IDEAL Bathroom Cabinet W-921. Entirely new. Adaptable to any bathroom and a marvel of convenience. Price $15.00.

IDEAL *Built-In* FURNITURE

a product of

WM. CAMERON & CO., *INC., Manufacturers*

Plant and General Offices: Waco, Texas

Jobbers and Retail Lumber Dealers almost everywhere

CURTIS WOODWORK

THE CURTIS COMPANIES SERVICE BUREAU

999 Curtis Building, CLINTON, IOWA

Curtis Bros. & Co.....CLINTON, IOWA
Curtis & Yale Co.....WAUSAU, WISCONSIN
Curtis Sash & Door Co.....SIOUX CITY, IOWA
Curtis, Towle & Paine Co.....LINCOLN, NEBRASKA
Curtis, Towle & Paine Co.....TOPEKA, KANSAS
Curtis-Yale-Holland Co.....MINNEAPOLIS, MINN.
Curtis Door & Sash Co.....CHICAGO, ILLINOIS

Curtis Companies, Incorporated, Clinton, Iowa. Sales Office and Display Rooms, Room 201, 9 East 41st St., New York City

Manufacturers of Trademarked Architectural Interior and Exterior Woodwork, Standardized

Products

Standardized Architectural Woodwork:

Complete Entrances
Exterior Doors
Interior Doors
Frames
Mantels
Panel Work
Dining Alcoves
Stairways
Stair Material
Windows and Sash
Louvres
Blinds
Porch Work

1866 CURTIS

This trademark appears only on Curtis Woodwork. It guarantees the choicest woods, high standards of workmanship and authentic designs.

Built-in Woodwork:
Bookcases
Corner Cases
China Closets
Sideboards
Buffets
Kitchen Dressers
Ironing Boards
Dressing Tables and Cases
Medicine Cabinets
Exterior Moldings
Interior Trim

Design

Woodwork has two-fold importance in the home beautiful. It is architecturally and structurally a part of the house itself. At the same time it strikes the keynote of the interior decorative scheme. Beauty in the home must begin with the woodwork.

Realizing this two-fold importance, the makers of Curtis Woodwork have made available to contractors and home builders everywhere east of the Rockies, woodwork designs that conform to the most rigid requirements of the architect and interior decorator. Curtis designs were created especially for the Curtis Companies by architects who have designed some of the most expensive houses in America and done work that authorities say is "worthy to stand with the best work of all time." The best houses in America and England have served as prototypes for Curtis designs; and the result is woodwork beautiful enough for the mansion but within the buying power of the builder of the most modest cottage.

Construction

These authentic designs are produced by Curtis according to very rigid specifications as regards materials, methods and workmanship. It is impossible to describe here all Curtis construction details in full. The examples of the rabbeted check rail used in Curtis double-hung windows; the panel thicknesses in Curtis softwood doors; and the lock-mitre joint in Curtis cabinetwork, must suffice. Study these carefully, for they are typical of the through-and-through goodness that only the Curtis trade-mark stands for.

Price

In spite of authentic design and superior materials and construction, Curtis Woodwork costs little or no more than ordinary millwork. When such expense items as cutting and fitting and sanding on the job are taken into account, Curtis Woodwork often costs less. Low cost has been made possible by large scale production and wide distribution.

Deliveries

Curtis Woodwork is instantly available, either from the Curtis Dealer, who usually stocks a large line, or through him from the nearest Curtis plant. There are no chances for delays, mistakes or expense, as with made-to-order millwork. Your house is not held up waiting for the frames, trim, stairwork or cabinetwork, when you use Curtis Woodwork.

Curtis Woodwork is sold everywhere east of the Rockies through lumber dealers who handle the line. The Curtis dealer nearest you will be glad to give you full information about the items he carries in stock and to show you his Curtis Catalog, which offers you a complete selection of Curtis designs, of which those shown here are merely examples.

Or a letter to the Curtis Companies Service Bureau, 999 Curtis Building, Clinton, Iowa, describing your requirements, will bring complete information and recommendations.

Ovolo Molding

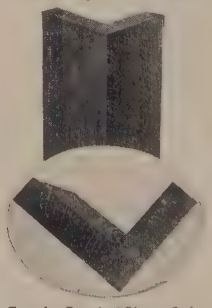
Flush Molding

Curtis Door Moldings—The cross-sections on the left show the two types of moldings—ovolo and flush—used on all Curtis doors, and the construction of solid "raised" panels in softwood doors. In doors 1¾-inch thick these panels are 1⅛-inch thick; in 1⅜-inch doors, they are ⅞-inch thick. Thus they have greater strength and a heavier "raise" that gives the door beauty and interest not found in flatter panels. Note that the ovolo molding is one with the stile or rail, while the flush molding is "applied" to a spline set in a groove in the stile or rail so that as the panel expands and contracts the molding will not pull away from the frame of the door.

Curtis Rabbeted Check-Rail—The drawing at the right shows a section through the check-rails on a Curtis double-hung window. Note the offset or "rabbet" in the beveled joint between these rails. Seven times as much wind pressure is required to get through this kind of a joint as an ordinary beveled check-rail.

Curtis Rabbeted Check-Rail

Curtis Lock-Mitre Joint and Ordinary Nailed Butt Joint—In Curtis cabinetwork corners are made by the Curtis lock-mitre or tongue-and groove joint. The pieces are glued, not nailed together. Result: No edge grain wood at the corner to mar the finished surface; no nail head holes; no open cracks; and a stronger joint. This same construction is used in making square newels.



Curtis Lock-Mitre Joint

Ordinary Nailed Butt Joint

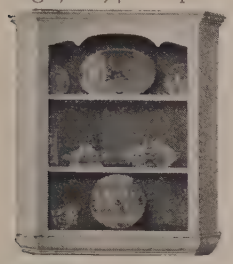
In Curtis cabinets with drawers, the drawer sides and ends are put together with dovetailed corners; they cannot pull apart. The drawers are slightly narrower in the back than in the front and they operate on center guides. These details prevent binding and jamming. The drawer bottoms are three-ply boards set in grooves in the sides and ends all around; they cannot come loose and slip out at any point. Face stock in Curtis cabinets is 1⅛-inch thick; the wood is all carefully matched in both color and grain; and Curtis construction is better than that found in much of the fine furniture on the market.

THE CURTIS CO. SERVICE BUREAU, 999 Curtis Bldg., Clinton, Iowa

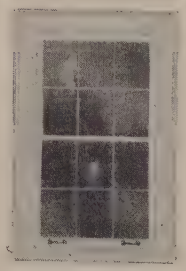
(Left) **Curtis Kitchen Combination D-9.** Occupies a space 6'10" in width and 6'10" in height, including a 2" toe space. There is a broom closet on the left end which may be interchanged if the ironing board is preferred at the opposite end. Furnished in pine, in the white, without hardware.

Curtis Kitchen Corner Combination H-9. Extends 8'10" along the right wall and 6'0" along the left wall. This combination shows the great possibilities in the Curtis series of sectional kitchen units for building a dresser around a room corner such as a pantry combination often requires. This is only one of many equally desirable groupings available through the use of Curtis sectional kitchen units.

Hanging China Case C-6410. Furnished in pine, to hang in corner. Overall dimensions 2'6¾" wide, 2'11⅛" high, 1'6¾" deep.



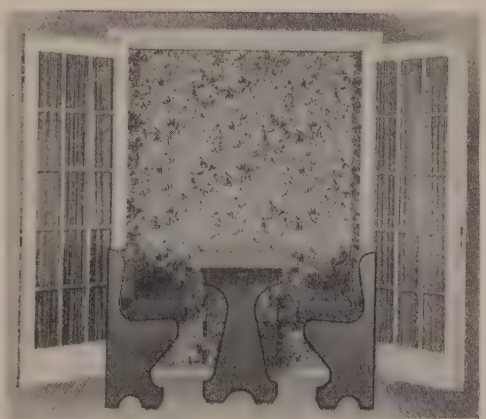
Window C-2714. Circle-top casement window. See Curtis Catalog at dealers for full selection of windows.



Window C-2512. The Curtis line includes windows of all types in all necessary sizes. This is a popular Colonial design.

(Right) **Venetian Medicine Cabinet C-6930.** Overall size of case is 1'2⅛" x 2'1¾". Mirror size, 18 x 32. Has three adjustable glass shelves. All hardware applied. You can see other designs in the Curtis dealer's catalog.

French Doors C-3212. Unusual and attractive are these French doors, with the tops arched in a perfect half circle. Very popular now. Made in pine in sizes ranging from 4'0" x 6'8" to 5'0" x 7'0". No hardware included. Curtis makes numerous designs of French doors.



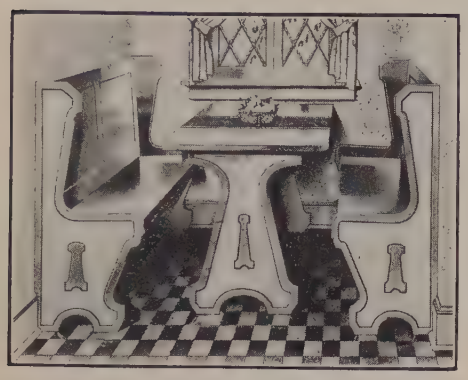
Folding Dinette C-6605. Mangels Bros. dinette for opening 5'0" x 6'8". Patent No. 1,639,141. Skillfully designed with folding seat backs at comfortable angle. Only a few seconds are required to prepare for use or fold away. No intricate adjustments required. French doors or panel doors may be used. May be had with green Formica table top at slight additional cost.

Curtis Entrance Edward. Door **C-1070,** frame **C-1762.** This entrance is especially appropriate for the house of Tudor or Spanish type. There are Curtis entrances and doors for houses of all styles and sizes. The Curtis Woodwork dealer can show you some of these and give you prices and full information on the entire line.

THE CURTIS CO. SERVICE BUREAU, 999 Curtis Bldg., Clinton, Iowa

Qualitybilt WOODWORK REGISTERED STANDARDIZED

Stock Cabinet Specialties



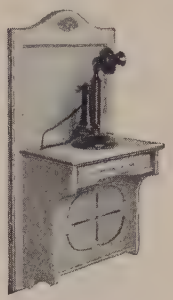
Breakfast Nook FL2565
This attractive nook is well made of Clear White Pine. Shipped semi-K.D., accurately machined for quick assembling. Table top is 2'2" x 4'0"; seats are 3'0" high, 4'6" long; requires space 5'4" to 5'8" wide by 4'6" deep.

Corner China Case FL2450
Size 3'1½" x 7'10".
Requires recess 2'7" x 7'4".

Bookcase and Divider Cabinet FL2055
Size 2'4" wide, 4'9" high, 1'1" deep.

Other Qualitybilt Products:

Sash, doors, blinds, frames, screens, combination doors, mouldings, interior trim, stair work, cabinet work, complete line of building woodwork. Sold only through lumber dealers.



On-the-Wall Telephone Cabinet FL1972
Attached over plaster. Size 1'5" x 2'9¾". Set up. Projects 10".

Bath Room Case FL3095
Width overall 2'0". Base 4'0" high, upper section 2'11" high. Can be placed open or in recess.

FL 2715
Above design is one of our Economy Kitchen Cabinets. Carried in stock in widths 2'0", 2'8", 3'0", 3'6", 4'0", 4'6" and 5'0", for ceilings 8'0" to 8'6". Doors paneled or glazed. Fronts 1⅛" thick. Shipped semi-K.D. in cartons, ready to assemble.

Modern Built-In Conveniences

These are items of standard cabinet work which are constantly in demand as one or more is required in every modern home. They have been carefully designed for beauty and utility and are manufactured in quantities, which materially reduces your cost. Prompt deliveries are assured by our complete stock ready for shipment. Most of these pieces are shipped semi-K.D., accurately machined for quick assembling on the job. Individual packing in dust proof cartons protects them from dirt and dust until ready to install. Additional stock cabinet items together with complete specifications on all these designs are covered in our cabinet catalog No. 128. Copy free on request.

A Colonial Stairs of Qualitybilt standard stock parts.

"On-the-Wall"—"In-the-Door" Ironing Boards

In addition to the two exclusive ironing boards below, we make the recess type in both one and two-door styles.

FL2960 On-the-Wall Ironing Board
Size 1'5½" x 5'10". No recess required.

FL2960-B
This shows table unit 24" x 36" attached to supporting panels of FL 2960.

In-the-Door Ironing Board
Made in two types and sizes 2'0" x 6'6" to 3'0" x 7'0".

Standardized Kitchen Units

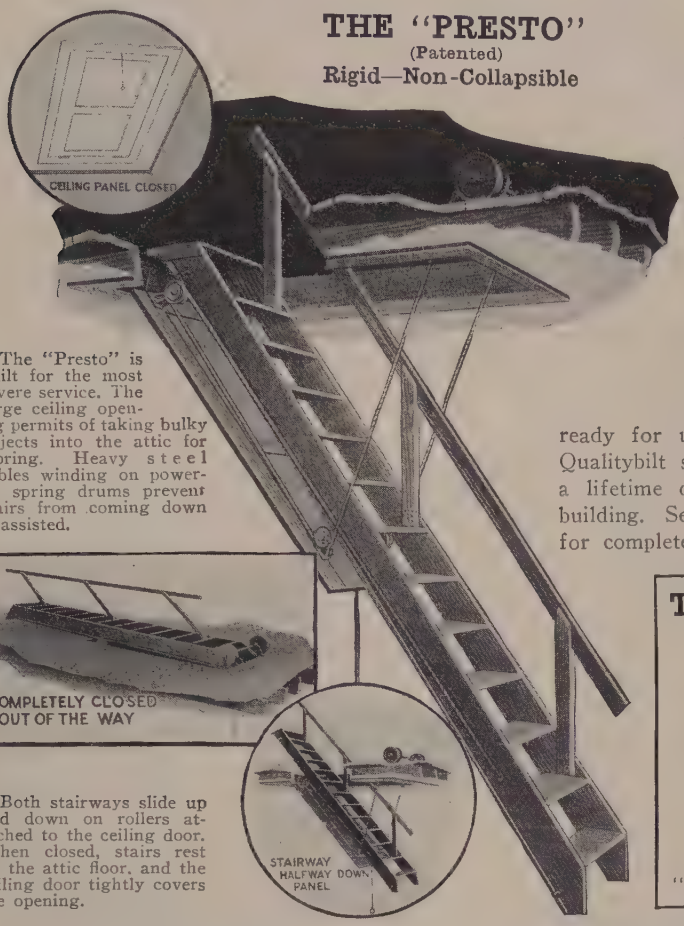
A typical installation of one of the many combinations possible with Qualitybilt Standardized Kitchen Units.

FARLEY & LOETSCHER MFG. CO., Dubuque, Iowa

Disappearing Stairways

Qualitybilt DISAPPEARING STAIRWAYS (REGISTERED)

THE "PRESTO"
(Patented)
Rigid—Non-Collapsible



The "Presto" is built for the most severe service. The large ceiling opening permits of taking bulky objects into the attic for storing. Heavy steel cables winding on powerful spring drums prevent stairs from coming down unassisted.

Both stairways slide up and down on rollers attached to the ceiling door. When closed, stairs rest on the attic floor, and the ceiling door tightly covers the opening.

A disappearing stairway makes it possible to utilize the attic without sacrificing any floor space below for a stationary stairs. It can be installed in hall, bed room or wherever convenient. Provides one or more extra rooms, thus adding from five to ten times its cost to the value of the home. Safe and simple—easily operated—always ready for use, yet never in the way. Qualitybilt stairs are sturdily built for a lifetime of service, in any type of building. See your local lumber dealer for complete description and prices.

THE "VICTOR"
(Patent applied for)

This is a rigid, serviceable stairway with efficient hardware which prevents it from coming down without a slight pull. It is especially adapted to limited spaces, as it does not project as far into the room as the "Presto."

Table of Space Required

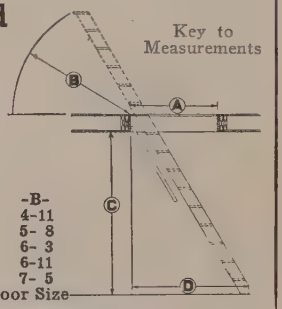
The "Victor"

-C-	-A-	-D-	-B-
7-0	2-4x4-6	5- 0	4-6
7-6	2-4x4-6	5- 3	5-3
8-0	2-4x4-6	5- 7	5-9
8-6	2-4x4-6	5-10	6-6
9-0	2-4x4-6	5-10	6-6

The "Presto"

-C-	-A-	-D-	-B-
7-6 to 7-11	2-6x6- 3	7- 2	4-11
8-0 to 9- 0	2-6x6- 3	7- 6	5- 8
9-1 to 10- 0	2-6x6-11	8- 1	6- 3
10-1 to 10-11	2-6x7- 3	8-10	6-11
11-0	2-6x7- 6	9- 1	7- 5

"A" Measurement is Finished Opening, Door Size



Specifications—The Presto stairway complete, includes 1⅛" ceiling door, stairs, hand rail with supports, all necessary hardware of non-breakable pressed steel black Japanned, spring drums, steel rope and three cross tie rods. Stringers are ¾" x 7¼" housed. Treads are ¾" x 7". No jambs or trim included. Complete instructions for erecting, furnished.

GUARANTEE

Qualitybilt Disappearing Stairways are guaranteed to be mechanically perfect and to last as long as the building. If any stairway does not prove satisfactory when properly installed, it may be returned to us within sixty days at our expense, and the full purchase price will be refunded.

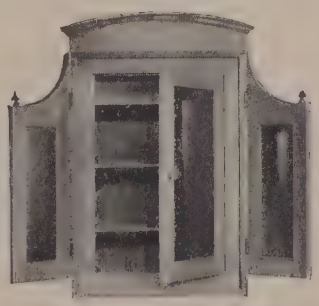
Specifications—The Victor stairway complete, includes 1⅛" ceiling panel door, stairs, hand rail with supports and complete hardware black Japanned. Stringers are ¾" x 4" housed. Treads are ¾" x 5" No jambs or trim included. Complete instructions for erecting furnished. All Victors are shipped for 9'0" ceilings. Easily reduced in height by cutting off bottom.

China Cases

Hanging China Case FL2479

This attractive china case is made to hang on the wall directly over the plaster, making it easily installed or removed. Its 7" depth inside is ample for ordinary dishes and provides an unusual amount of shelf space. Size overall is 3'2" wide x 3'3" high x 8½" deep. Shipped semi-K.D. in dust proof cartons.

Medicine Cabinets



Bath Room Cabinet FL3056

FL3067

The above designs of Medicine Cabinets can be secured from stock, glazed with plain plate or bevel plate mirrors, sizes 12 x 16, 12 x 18, 14 x 18, 14 x 20 and 16 x 20. These require rough wall openings 6 inches wider and 6 inches higher than size of mirror. The cabinet with wings and cap shown in combination FL3056 is very popular with the housewife.

Fireplaces

MANTEL FL2102

This beautiful mantel is popular because of its symmetry and moderate cost. Equally attractive in stained or painted finish, and can also be supplied with plain pilasters. Body size is 63" wide, 51" high. Shelf is 7¼" wide, 72" long. The wood opening for face brick is 48" wide x 36½" high.

Your Local Lumber Dealer can supply you with these Qualitybilt Cabinet Specialities

FARLEY & LOETSCHER MFG. CO., Dubuque, Iowa

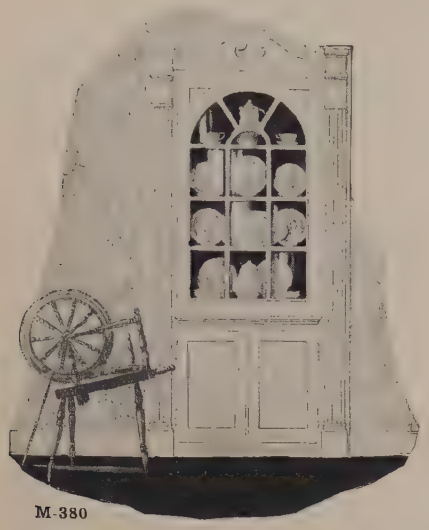
MORGAN WOODWORK

CABINET WORK

THE tendency of the day is to build into both new and old homes the maximum of beauty, cheerfulness, comfort and livability. Home lovers are no longer content with living in just a house—within four walls figuratively speaking—but rather do they demand and secure for themselves cheerful, homey designs of fine Cabinet Work and Built-in Conveniences; graceful Stairways; pleasing Trim; Mouldings; Doors; Windows and all of the other fine woodwork that does so much in making a house—a home.

With this in mind we have endeavored to develop the finest and most comprehensive line of

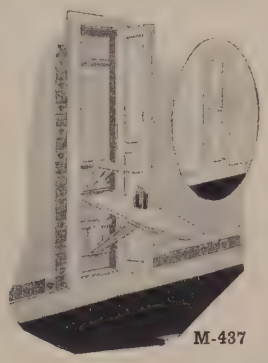
See Current Price Supplement for prices



M-380

China Cabinet

Quaint old Colonial design cabinet of rare beauty. Genuine reproduction of early American cabinet, common in Colonial times throughout the original colonies.



M-437

Built In Ironing Board

A necessity conveniently placed in the wall right where it is most needed. The modern home could not well be without one.

M-375A

China Cabinet

Another charming cabinet that will fit in gracefully in almost any home.

M-399½

All Purpose Cabinet

The All Purpose Cabinet shown installed as a linen case in the bathroom. This cabinet has many practical uses and may be used in a hundred different ways about the home.

M-573

Linen Closet

Every housewife needs a clean spacious cabinet for blankets and linen. The one shown above is very popular because it takes but a very little space.

Write for Complete Cabinet Work Catalog

Beautiful Stairways

Easily Made with

Morgan Standardized Stair Parts

One of the most pleasing and distinctive parts of any home interior is a perfectly balanced stair case. In years past a stairway of genuine artistry was a luxury which only the well-to-do could afford.

But today Morgan Stair Parts have brought beautiful stairways of pleasing design and sturdy construction well within the reach of every home builder. Already cut and fitted these parts make stair building easy and insure a finished stair case accurate and correct in every detail.

Whether you are planning a new home or remodeling the old one, investigate the many advantages of constructing stairways with these parts.

THESE PAGES SHOW ONLY A SMALL PART OF THE LARGE ASSORTMENT OF MORGAN WOODWORK LISTED IN THE MORGAN PRICE SUPPLEMENT—WRITE DEPT. HAC FOR COPY

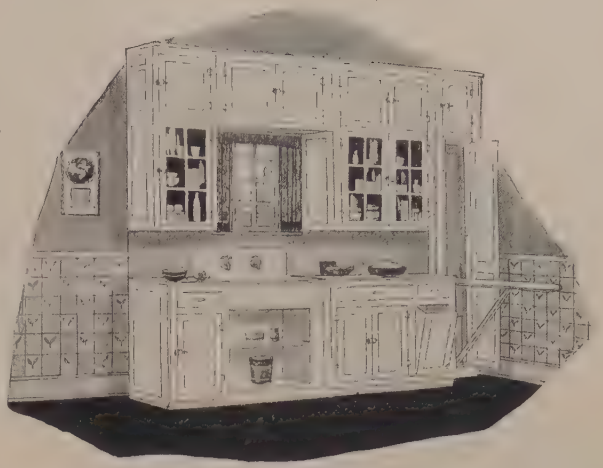
MORGAN WOODWORK
FOR EVERY NEED

Cabinet Work and Built-in Conveniences in the country and present a portion of it to you in these pages.

In designing these Cabinets every consideration was given to Architectural Correctness, Structural Strength and Practicability.

Many Leading Architects and Home Builders of note agree that here indeed is a variety of designs that harmonize perfectly with the predominating architecture of the day and that fit in with the demands of the ultimate home owner. To be sure of the quality—insist on the Morgan Label—*The mark of dependability and lasting satisfaction.*

Sizes and Shipping Information



Utility Kitchen Cabinet—Combination One

Modern kitchen cabinets have lightened the load of household tasks and made the kitchen a place of efficiency. The Utility Kitchen Cabinets afford many possible combinations to meet every kitchen requirement. The one shown above is typical.

M-550½

Telephone Cabinet

A very pleasing cabinet. Wires, bell box and phone book are hidden but easily accessible in the lower compartment.

M-395¼

MORGAN

This mark of dependability stamped on all Morgan Woodwork

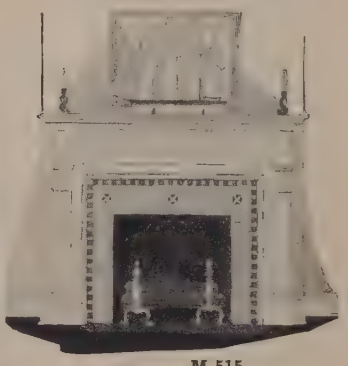
Breakfast Nook

A pleasant place to to start a busy day. This nook is artistically designed and planned to meet every requirement.

M-399½

All Purpose Cabinet

Another use for the All Purpose Cabinet. Here two have been joined together to make a very attractive and roomy bookcase for either living room or den.



M-515

Mantel

No home seems quite complete without a cheerful fireplace and a well designed Mantel. The one shown above is an exact reproduction of an authentic early American design.

M-484

Medicine Cabinet

One of the many fine designs offered for your selection in the very complete Morgan Line. All sturdily built to give long and satisfactory service.

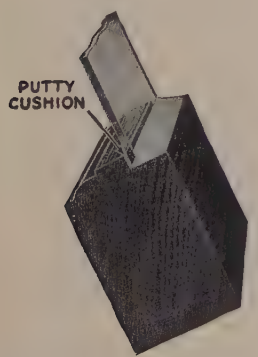
Windows of Quality

Poor windows soon remove all the joy and anticipated happiness from the home of our dreams. Most of us become "window conscious" only after bitter experience with the poorer grade.

Morgan windows are the result of years of experience and development. They render complete window satisfaction the year 'round. No sticking and jamming, no rattling noisily and loosely in their frames but smooth and easy operation at all times.

The glass in Morgan Windows is bedded in putty and back puttied. (See illustration to left.)

Pure linseed oil putty made by a special process according to an exclusive Morgan formula is used—never a common, commercial kind.



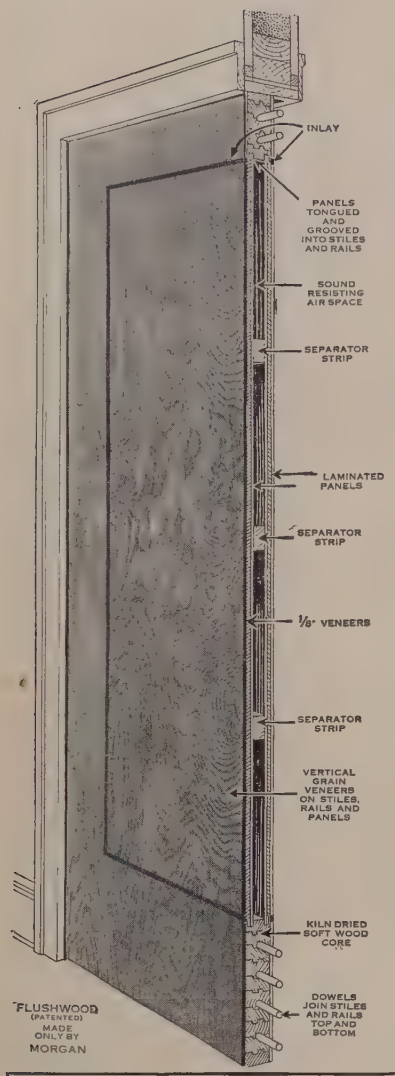
Glass Bedded in Putty and Back Puttied

Our putty completely surrounds the edges of the glass, forming a solid, yet plastic cushion which absorbs shocks, excludes drafts and rain and prevents breakage in transit and handling and eliminates distracting rattling in the glass after installation. Morgan putty forms a perfect non-chip, non-crack binder uniting wood and glass into a complete unit.

M-1350

MORGAN SASH & DOOR CO. Chicago-Detroit
MORGAN CO. Oshkosh-New York
MORGAN MILLWORK COMPANY Baltimore-Jersey City-Greensboro Wilmington
SAW MILL OPERATIONS Orin, Wash.-Forrest City, Ark.

MORGAN DOORS


INLAY
PANELS TONGUED AND GROOVED INTO STILES AND RAILS
SOUND RESISTING AIR SPACE
SEPARATOR STRIP
LAMINATED PANELS
SEPARATOR STRIP
⅛" VENEERS
SEPARATOR STRIP
VERTICAL GRAIN VENEERS ON STILES, RAILS AND PANELS
KILN DRIED SOFT WOOD CORE
DOWELS JOIN STILES AND RAILS TOP AND BOTTOM
FLUSHWOOD (PATENTED) MADE ONLY BY MORGAN

FLUSHWOOD
(PATENTED)

The Improved Flush Door

Flushwood is the registered trademark of the perfected flush door developed by the Morgan Woodwork Organization, manufacturers of doors since 1855.

Flushwood embodies one of the greatest improvements that has been made in door construction in the past twenty years. This statement is based not only on our knowledge of door manufacture, but on the opinion of architects and builders who have studied and used the Flushwood Door, and on scientific laboratory tests.

Here then is a new door—a better door—perfected after years of study and experimental work in the Morgan factory, and because of its improved design and construction the U. S. Patent Office has issued broad patents covering Flushwood.

For years the regular flush wood has been used extensively in hospitals, schools, public buildings, apartment buildings, hotels, residences and many other types of construction. It is a door much unlike the ordinary type in that it has a plain, smooth surface on both sides without any recesses, panels or moulded edges. Its unique construction (See Cross Section drawing to left) provides no place for dirt to collect, and offers a sanitary feature that has made the flush door especially suitable for any building in which the cleanliness of doors constitutes a problem.

The new Flushwood has this sanitary feature, as well as all of the other advantages of the regular flush door, without any of the disadvantages of the old-fashioned solid door.

Features of Construction

1. Flushwood is more sound-resistant. The dead air space between the panels acts as a sound-resisting medium, not equalled in any other door. Dr. Paul E. Sabine, one of the nation's foremost authorities on sound transmission and acoustics, conducted exhaustive tests at the famous Riverbank Laboratories, Geneva, and proved conclusively that the reduction of sound is much greater by a Flushwood Door than by a regular flush door, or a one-panel door. This resistance to sound transmission is an important feature in the construction of hotels, hospitals, schools, apartments, etc., where sound transmission must be reduced to a minimum.

2. Flushwood weighs only two-thirds as much as the old fashioned, solid flush door. It consequently is free from the great stress of its own weight which wrought damage on the hardware of the solid door as well as giving the door itself a tendency to sag and twist. This is particularly important in the case of wide doors. Further, the Flushwood Door offers a substantial saving in freight and in handling costs on the job, together with a saving in the cost of fitting and hanging.

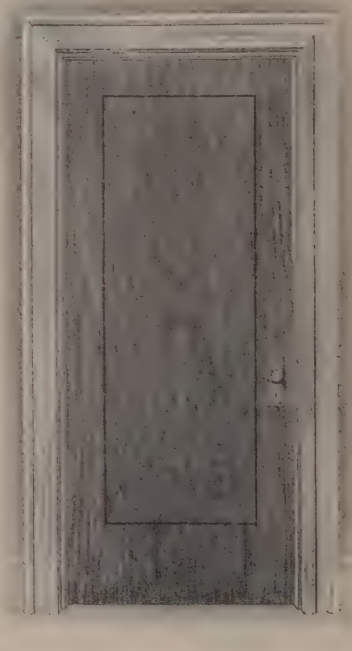
3. Flushwood Doors will not warp or twist. The amount of glue (80% water) and wood (adding to the dead weight of the door) used in the construction of Flushwood is much less than that used in the old style flush door. Flushwood Doors which have been in constant use for over three years are standing just as straight as they stood the day they left the factory. Every Flushwood Door is backed up by the Morgan Guarantee.

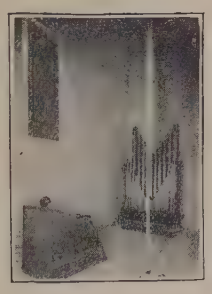
4. Flushwood can be made with combinations of different woods, giving beautiful effects when finished, while the solid flush door is, of necessity, limited to one kind of face veneer on either side of the door. For example, the Flushwood Door can be made with stiles and rails of plain wood and panels of figured woods. Practically any desired combination of woods can be had in the Flushwood Door. Doors are made in all standard sizes.

5. A beautiful inlay that harmonizes with the woods used in the door is furnished at no extra cost.

6. The cost of Flushwood Doors is surprisingly low. In most cases a Flushwood Door, inlaid two sides, can be purchased for about the same price as an ordinary flush door without inlay. And obviously, the Flushwood Door costs considerably less than an inlaid solid flush door.

7. No "tissue paper" veneers are used in this door for every veneer is at least ⅛ inch thick before sanding





"A"

These Tests Prove It Is Sound Resisting

"B"

Photo shows test of Flushwood Door sound resistance by Doctor Paul E. Sabine in sound chamber of Riverbank Laboratories, Geneva. Organ is operated by observer seated in wood cabinet. (This prevents absorption of sound by observer's clothing.) The time during which the sound remains audible is a measure of sound in the sound chamber. (See "B" to right.)

Observer with stop watch chronometer, noting the time the sound from the sound chamber remains audible on the further side of the Flushwood door. The difference in the duration of audible sound with the observer first in the sound chamber and then on the farther side of the Flushwood door is a measure of the factor by which the sound intensity is reduced by the Flushwood Door.

THESE PAGES SHOW ONLY A SMALL PART OF THE LARGE ASSORTMENT OF MORGAN WOODWORK LISTED IN THE MORGAN PRICE SUPPLEMENT—WRITE DEPT. HAC FOR COPY

MORGAN DOORS

The Lockwood Door

Artistic Design and Sturdy Construction Are Here Combined to Make Doors of Character

In Morgan Doors you will find combined every feature that makes for real door quality.

Artistic design; perfect in balance and proportion; beautiful woods, wondrous grain effects that bring a delightful new touch to the interior; sturdy construction, assuring a long life of satisfactory, care free service; all these mark each Morgan Door as a leader.

You owe it to your own satisfaction and happiness in the home you build to get the best. Especially when, as in these doors, there is no added cost for the quality.

M-829

Mirror Door

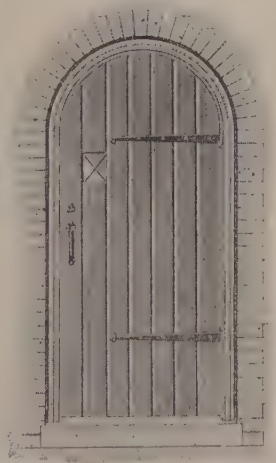
There is no added cost for "Morgan-Quality"

Doors for Every Requirement

The Morgan line of doors is very complete affording you a wealth of selection difficult to equal.

M-699

Doors for both interior and exterior—doors for the garage, storm doors, mirror doors, in fact every door requirement is filled properly by one of the many Morgan doors built for that purpose.



M-914

Investigate the variety of designs offered, either at your dealer's or write to our nearest office direct. You will be satisfied that the Morgan stamp on every door you buy will mean a door built for the job and able to fill the opening for years of service.

MORGAN

Look for This Stamp on Every Door You Buy

It Is Your Guarantee of Satisfaction

M-817

MORGAN SASH & DOOR CO.
Chicago-Detroit

MORGAN CO.
Oshkosh-New York

MORGAN MILLWORK COMPANY
Baltimore-Jersey City-Greensboro
Wilmington

SAW MILL OPERATIONS
Orin, Wash.-Forrest City, Ark.

World's Most Beautiful Door

BRANCH OFFICES AND DISPLAY ROOMS:

New York, N. Y.
202 Metropolitan Life Bldg.

Washington, D. C.
726 Woodward Bldg.

Cleveland, Ohio
Rockefeller Bldg.

PAINE MIRACLE DOOR

Made by PAINE LUMBER COMPANY, Ltd.

Oshkosh, Wisconsin

The PAINE Miracle Door

TRADE MARK REG. PAT. JULY 10, 1923

Patented July 10, 1923

BRANCH OFFICES AND DISPLAY ROOMS:

Chicago, Ill.
2305-2309 Tribune Tower

Detroit, Mich.
11-221 General Motors Building

Kansas City, Mo.
606 New York Life Bldg.

Miami Beach
1661 Lenox Ave.

The Paine Miracle Door gives beauty and distinction to the home, yet it is not an expensive door. In softwood the Miracle Door costs only about one dollar more than a one-panel softwood door while in hardwood the Miracle Door costs no more than a one-panel hardwood door.

All Woods—All Sizes

Paine Miracle Doors are made in all woods and in all sizes from 2x6′ to 3x7′, each size being obtainable in two thicknesses—1⅜″ and 1¾″.

Beautiful Catalog on Request

It is impossible to do justice to the Miracle Door in these small illustrations but we will gladly mail you on request our 60-page catalog containing many beautiful illustrations in color, showing the exact appearance of door with suggestions for appropriate wall finish.

DESIGN 700

A beautiful single panel door that in hardwood, natural finish, or softwood, painted or stained, harmonizes with any style of interior decoration.

DESIGN 703

A good door to use in locations where light is needed.

DESIGN 704

A full glazed door for front entrance or vestibule.

DESIGN 705

A French door which may be used as entrance door if desired.

DESIGN 706

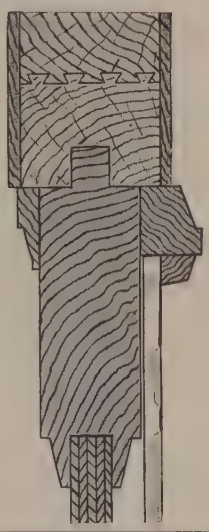
Most beautiful French door made. Used single or in pairs this door gives distinction and charm to the home in which it is used.

DESIGN 701

The Miracle Mirror Door can be quickly made from a stock Miracle panel door. Diagram at right shows cross section of hardwood door with mirror. Back of door matches Design 700.

Standard Sizes of Miracle Doors

The following sizes are carried in stock for immediate shipment. Sizes printed in black type can be furnished from stock in either Birch Veneer or Softwood, 1⅜″ thick. Sizes printed in light face type are stocked in softwood only, 1⅜″ thick. Sizes followed by an asterisk (*) can be shipped from stock in Birch Veneer, 1¾″ thick. Miracle Doors can be made of any wood, any size, to order.



2- 0x6-0	3- 0x6- 8*
2- 0x6-6	2- 0x6-10
2- 2x6-6	2- 6x6-10*
2- 4x6-6	2- 8x6-10
2- 6x6-6*	2-10x6-10
2- 8x6-6	2- 0x7- 0*
2- 0x6-8*	2- 2x7- 0*
2- 2x6-8*	2- 4x7- 0*
2- 4x6-8*	2- 6x7- 0*
2- 6x6-8*	2- 8x7- 0*
2- 8x6-8*	2-10x7- 0*
2-10x6-8*	3- 0x7- 0*

DESIGN 702

This Mirror Door is made with mirror set on insert frame. The use of a narrower and shorter mirror results in a considerable saving in cost. Diagram at left shows cross section of softwood door with mirror.

PREMIER *Standardized* WOODWORK

READY-BUILT CABINET WORK

{ *Practical Economical Essential* }

BUILT-IN CONVENIENCES FOR EVERY ROOM IN THE HOME

Address: PREMIER, 2000 MILLS STREET, EL PASO, TEXAS

BATHROOM DRESSER

Premier No. 32

A new and unusually handy cabinet . . . takes only a few inches of floor space but offers a dresser top for toilet articles, a handy open shelf for towels, a storage place for sponges, brushes, disinfectants, toilet paper and a ventilated compartment for soiled linen. Everyone who has cleaned a bathroom and tried to keep everything handy will appreciate the real convenience of this bathroom dresser.

This cabinet can be built against the wall or into the wall as illustrated—2′ 2″ wide, 4′ 6″ high, 11″ deep. Made of white pine, carton packed with all hardware furnished, $23.10 — not set up.

FOLDING SEAT

Premier No. 18

You will appreciate the utility of a wall-type seat that is handy when you need it, but out of the way and out of sight when you don't want it. When sweeping or mopping floors the chair is an awkward nuisance, while a mere flip of the wrist will return the folding seat to its cabinet. Overall size 1′ 5½″ wide and 2′ 7½″ high; set up complete with all hardware but not painted, $7.70.

MULTI-STYLE LINEN CABINET

Premier No. 34

This cabinet provides easy sliding trays for linen, while shelves above are adequate for blankets and pillows. Cabinet can be installed in old homes as well as new ones. Can be built into room or in a closet —fits 2′6″x6′8″ door, 2′1″ deep. Cabinet at right, $42.05; at left, $26.25 (no doors furnished and no upper section)—not set up, assembling instructions in each package.

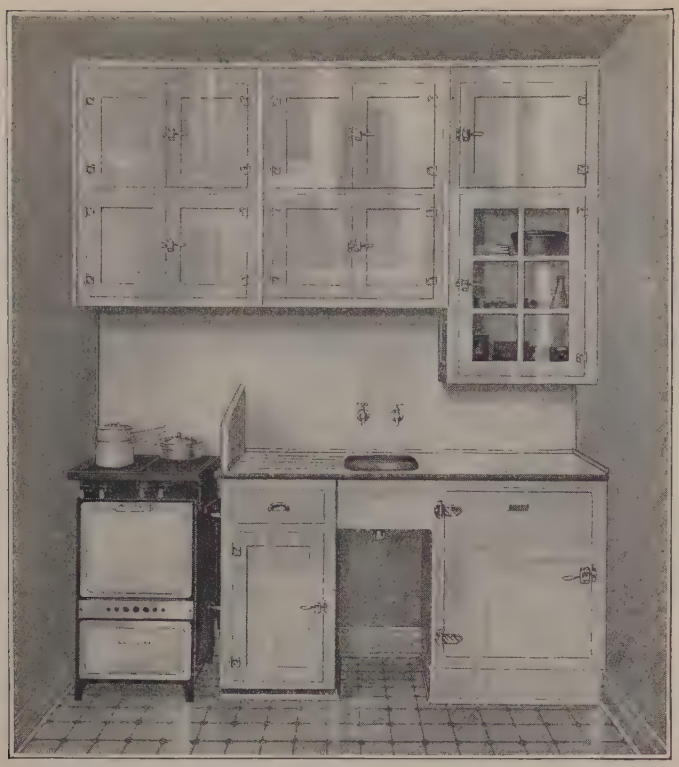
PREMIER STANDARDIZED WOODWORK, 2000 Mills St., El Paso, Tex.

The Practical Six KITCHEN

PREMIER Standardized WOODWORK

PRACTICAL
ECONOMICAL
ESSENTIAL

...With the various sizes of these six sections {carried in stock} any arrangement or any size kitchen cabinet can be built



Arrangement 42. Apartment Kitchenette in space 7'0" wide includes stove, sink, ice box, cabinets and working top. Can be adjusted to wider spaces. As shown $72.95, without ceiling compartments $60.75.

SPECIFICATIONS

All necessary hardware is furnished. A special design of nickel plated kitchen cabinet hardware is furnished for lip front doors.

All sections are provided with the Premier Patented Filler Strip which makes it easy (when joining to wall or other sections) to expand any section 6½".

The Practical Six Cabinets are shipped unpainted. To create special color schemes is simple, since panels and mouldings offer a guide for separating colors.

1. Base Sections *Depth of Cabinet* — 21" overall. *Height*— 3'0" including counter top. *Width*—(six sizes) 1'6", 2'0", 2'6", 3'0", 3'6", 4'0". *Packing*—Cabinet (KD) without counter top in carton.

2. Invertible Upper Sections

Depth of Cabinet—14" overall.

Height from Floor—7'0" when no ceiling compartment is used (see Arrangement 11); 7'4½" (see Arrangement 8); standard 8'6", but adjustable from 8'0" up when ceiling section doors are used (see Arrangements 17 and 18).

Width—(six sizes)—1'6", 2'0", 2'6", 3'0", 3'6", 4'0".

Doors—Either paneled (3 ply veneer) or glazed (6 lights) or upper section, paneled for ceiling compartment.

Ceiling Compartment Doors—Paneled (3 ply veneer)—regular six sizes.

Shelves adjustable metal pins furnished.

Packing—Cabinet sections (KD) carton packed; doors, wood banded edges and face protected with corrugated carton material.

3. Corner Section

Depth of Cabinet — Fits right angle corner, 14" along each side, 21" along each wall.

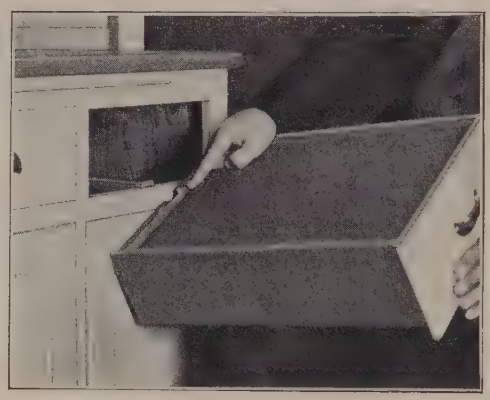
Height from Floor—Same as three height arrangements for Upper Section.

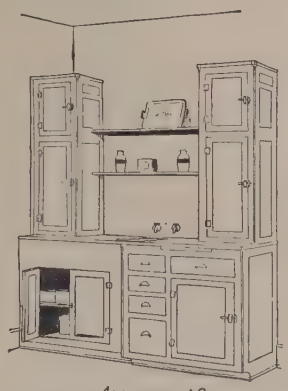
SEND FOR NEW DESCRIPTIVE

Special construction of drawers prevents sticking or tipping forward when opened—only one point of friction on single oak runner.

Arrangement 4

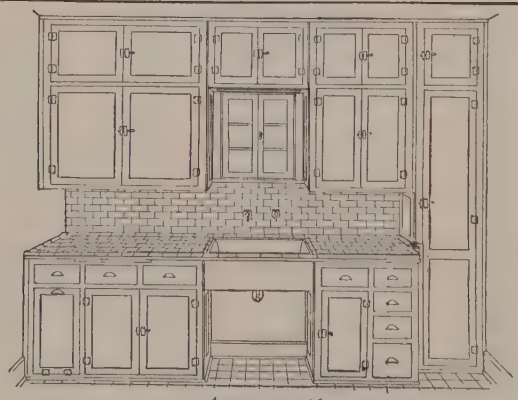
The Practical Six corner section is a great aid to utilizing space for cupboards when building around a corner. The installation shown requires 3'9" from corner on left and 4'9" from corner on right. This arrangement is practical when space from corner is 3'3" up to 5'9".





Arrangement 8

Upper Sections placed directly on counter top. Ceiling compartment within easy reach, although working space is reduced. Extra drawers shown in base section at right. Space required 5'0" to 8'3".



Arrangement 16

Apron used under sink instead of sink section. Tile drainboard and splash. Connecting section used over window. Broom cabinet used at right. Plenty of storage space in ceiling compartments, ample space for utensils and groceries within easy reach. Space required, 7'0" or wider; height 8'2" (top rails reduced and toe space eliminated).

Arrangement 9

Ironing Board in door of broom cabinet does not use any of the space in the broom closet itself and makes this cabinet serve a three-fold purpose when ceiling compartment is provided for extra storage space. This installation requires a minimum space of 7'0" or wider. The cabinet shown at left of sink is the 3'6" size; at right of sink, a 1'6" size.

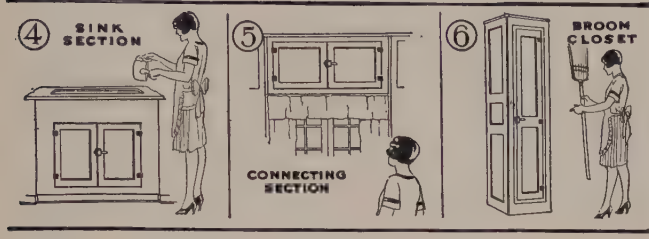
PREMIER STANDARDIZED WOOD WORK, 2000 Mills St., El Paso, Tex.

The Practical Six CABINETS

This kitchen cabinet receives its name from the fact that it is composed of six different sections which are flexible and practical.

PREMIER Standardized WOODWORK

PRACTICAL
ECONOMICAL
ESSENTIAL



SPECIFICATIONS *{continued}*

Doors—Either paneled or glazed for Upper Section, paneled for Ceiling Compartment—packed singly. *Shelves*—Two shelves furnished with shelf cleats.

4. Sink Sections *Important*—When ordering, notice that cabinet is packed without doors. Order doors separately when desired.

Depth—18″ or 20″ depending on width of sink. When 18″ sink is used, shelf and bottom are reduced, since they are furnished for 20″ depth.

Height from Floor—3′0″ including drainboard. *Width*—(three sizes) 3′0″, 3′6″, 4′0″.

Packing—Cabinet sections (KD) carton packed.

5. Connecting Sections *Depth of Cabinet*—14″ overall. *Height*—1′10″; height from floor regulated by other sections as shown in combination arrangements 16 and 17.

Width—(four sizes)—2′6″, 3′0″, 3′6″, 4′0″; when fitted between other sections or walls, can be expanded 6½″ by use of filler strip and paneled soffit which is furnished 6½″ longer than width of each section.

6. Broom Cabinet Sections *Important*—When ordering, notice that cabinet is packed without any door so either plain paneled door or ironing board compartment door can be ordered. *Depth of Cabinet*—14″ overall. *Width*—1′6″.

Height—7′0″; can also be equipped with Ceiling Section to fit height arrangements like 16 and 17.

Auxiliaries

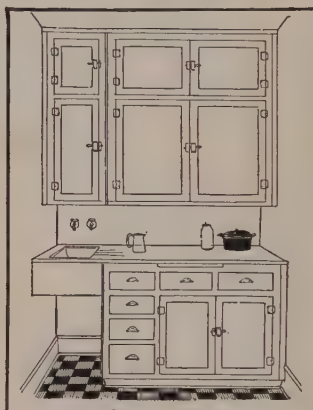
Extra Tier of Drawers—Three drawers with frame and hardware—will fit standard compartment of base sections. Carton packed (KD). (See Arrangements 4, 8 and 16).

Extra Bin—Complete with nickel plated pull. Will fit standard compartment of base sections. Carton packed (KD). (See Arrangement 9).

FOLDER AND PRICE LIST

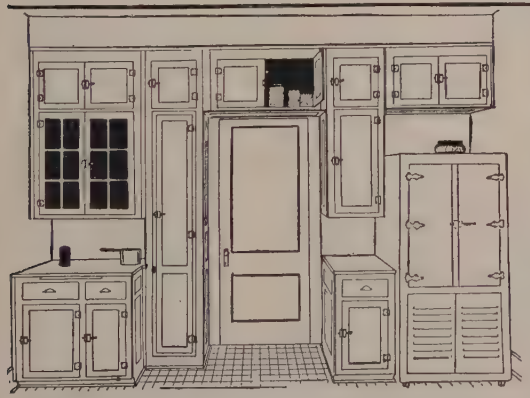
Tight fitting parts prevent dust from getting into cabinets—lip-front doors are attractive in appearance and easier to hang than other doors.

Arrangement 52. Popular arrangement for homes fits space from 7′0″ to 13′6″ wide. Cabinet work as shown with built-in ironing board in door of broom cabinet $118.75, without broom cabinet and without sink section $81.35.



Arrangement 12

Ideal for kitchenette; maximum cupboard space between narrow walls. Sink 14″x20″ is turned parallel to side wall. Space required, 4′0″ or wider; height arrangement C (8′0″ to 8′6″ or higher).



Arrangement 17

Storage space over room door and over refrigerator by using connecting sections. This arrangement demonstrates the remarkable utility of The Practical Six Cabinets to fit unusual conditions. Can be duplicated when there is 3′6″ to 4′0″ on either side of room door. Height arrangement showing plastered bulkhead built down. 10′0″ ceiling.

Arrangement 18

An airy, modern kitchen. On account of wide windows, upper sections narrower than base sections have been used. Toe space has been eliminated to fit cabinet to ceiling height of 8′0″. This makes excellent installation where there is 3′0″, 3′6″ or 4′0″ on either side of the electric sink—3′6″ base sections shown here.

Arrangement 11

Broom cabinets on either side of regular kitchen dresser; one with built-in ironing board in door, the other with shelves to make dish cabinet. Space required, 5′6″ to 7′6″; height arrangement A (7′0″—no ceiling compartment).

PREMIER STANDARDIZED WOOD WORK, 2000 Mills St., El Paso, Tex.

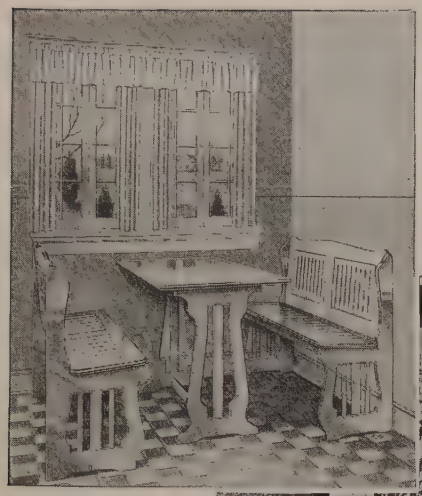
PREMIER *Standardized* WOODWORK

READY-BUILT CABINET WORK

BUILT-IN CONVENIENCES FOR EVERY ROOM IN THE HOME

Practical Economical Essential

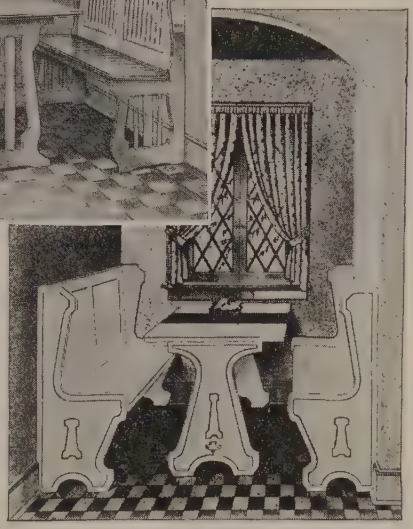
Address: PREMIER, 2000 MILLS STREET, EL PASO, TEXAS



BREAKFAST SETS

Premier No. 50

Neat mouldings on edges of all parts gives this set a furniture finish and offers unusual opportunities for attractive color harmonies. Space required—5′0″ wide, 4′0″ deep; white pine, $20.50; not set up.



Premier No. 1A

This nook has outlines and designs engraved on seat ends and table legs to facilitate two-tone painting. Space required—5′2″ wide, 4′6″ deep; white pine, $22.05; not set up.

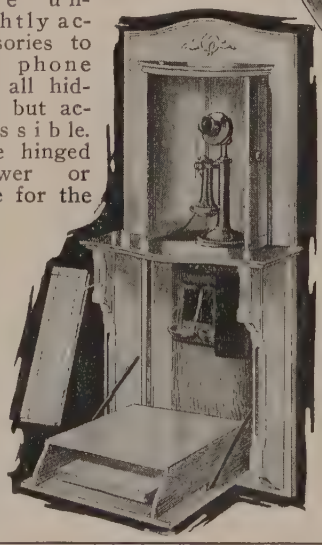
TELEPHONE CABINET

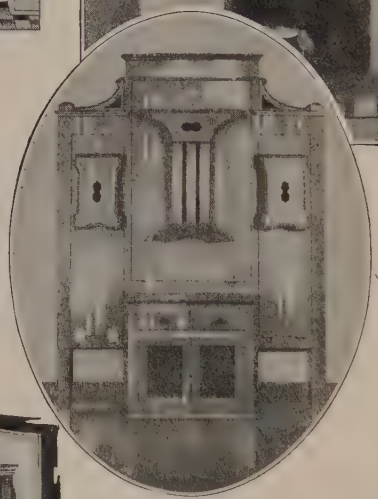
Premier No. 25

A slight touch on the knob opens both doors revealing the phone on shelf at a convenient height. Sound of bell can be heard distinctly through openings under slip panel and under hinged drawer.

The unsightly accessories to the phone are all hidden but accessible. The hinged drawer or bin provides a definite place for the phone book. This drawer is strong enough to be used as a table for the phone if it is desired to sit while talking.

This cabinet is 1′5½″ wide by 3′3″ high (overall) and requires a rough wall opening 1′2″ wide by 2′10½″ high. Set up complete—ready to install—carton packed but not painted—$20.50 in white pine, $31.50 in birch.





FOLDING BREAKFAST SET

Premier No. 13

This folding set adds color to the kitchen and saves space. Easily installed in old homes with five feet of wall space available—6′8″ high, made of white pine; designs engraved in seat and table legs and brackets make two color painting easy. Furnished set up with hardware—$33.10 without the Service Cabinet, which is $12.40 additional (not set up).

OTHER TELEPHONE CABINETS

Premier No. 23
$12.60

Premier No. 24
$10.55

Premier No. 21
$5.80

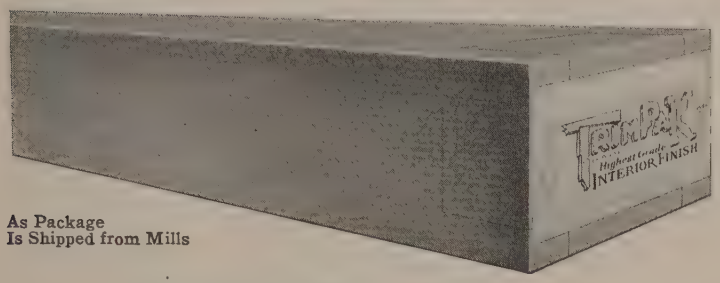
PREMIER STANDARDIZED WOODWORK, 2000 Mills St., El Paso, Tex.

TRIMPAK—Highest Grade Interior Finish

TRIMPAK CORPORATION

44 Whitehall St., NEW YORK, N. Y.

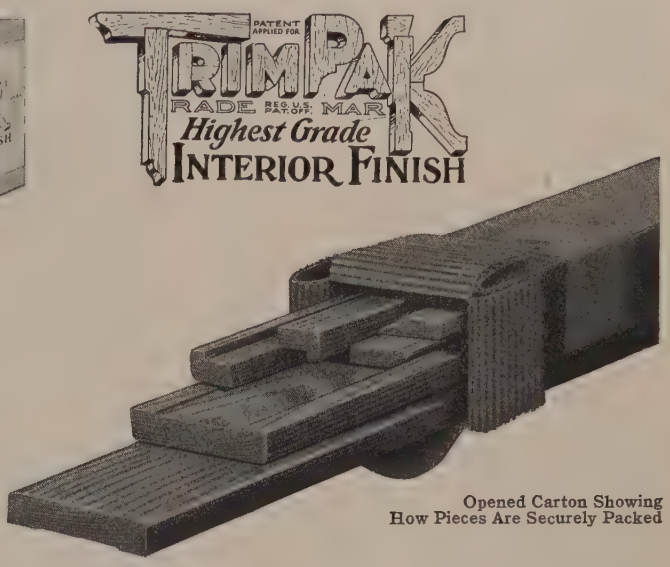
Interior Trim for Doors and Windows in Cartons



As Package
Is Shipped from Mills

Made in 15 Different Woods

Arkansas Soft Pine	Super-Tupelo
Pondosa Pine	Douglas Fir
Birch	Oak
Philippine Mahogany	Chestnut
Soft Yellow Poplar	Basswood
Louisiana Red Cypress	Red Gum
Medium Texture Poplar	Sap Gum
Yellow Pine	



Opened Carton Showing
How Pieces Are Securely Packed

Product

TrimPak is interior finish for doors and windows of the highest grade, cut to approximate lengths at the mill to insure perfect quality, to minimize waste and to guarantee delivery in perfect condition. TrimPak is made on special machinery in six famous lumber manufacturing plants in all the species and patterns desired by good builders in the various sections of the country. The necessary trim for each door or window is shipped in two sealed cartons, one containing the vertical parts and the other the horizontal parts. TrimPak is sold through retail lumber dealers throughout the United States.

Advantages to Building Contractors

You get trim of the highest grade in perfectly seasoned wood, already cut to approximate length and assembled for quick erection. Our careful inspection insures delivery to you without defect. Under the old method of handling trim the carpenters spent a large percentage of their time looking for different pieces to fit the particular openings they were trimming, matching stock and sanding. Many times when the job was finished they were over or short on some or all the items, which meant material wasted or time lost waiting for additional stock. With TrimPak only half the saw cuts formerly made are required.

Advantages to the Lumber Dealer

You handle trim in standard packages—every piece perfect and cut to approximate length by accurate, automatic machinery—instead of receiving mixed carloads of random lengths which must be sorted, stored, and got out of stock by a slow, laborious process every time an order is being filled. It is impossible to keep an evenly balanced stock of long trim—difficult to keep a correct inventory. Each carton of TrimPak is plainly labeled with name of wood and size of window or door opening. When filling an order for any kind of door or window trim it is only necessary to take two cartons from stock, a long carton containing the vertical parts and a short carton containing the horizontal parts.

Order From Your Lumber Dealer

Builders desiring to use the modern TrimPak method of applying interior trim may order directly from their local lumber dealers. Every lumber dealer in the United States can readily obtain TrimPak in the woods and patterns used in his community. Further information may be had direct from the TrimPak Corporation at the address printed below.

Scene in a model home recently built by the New York State Federation of Women's Clubs at Rockville Center, Long Island, N. Y., in which Trimpak was used for doors and windows.

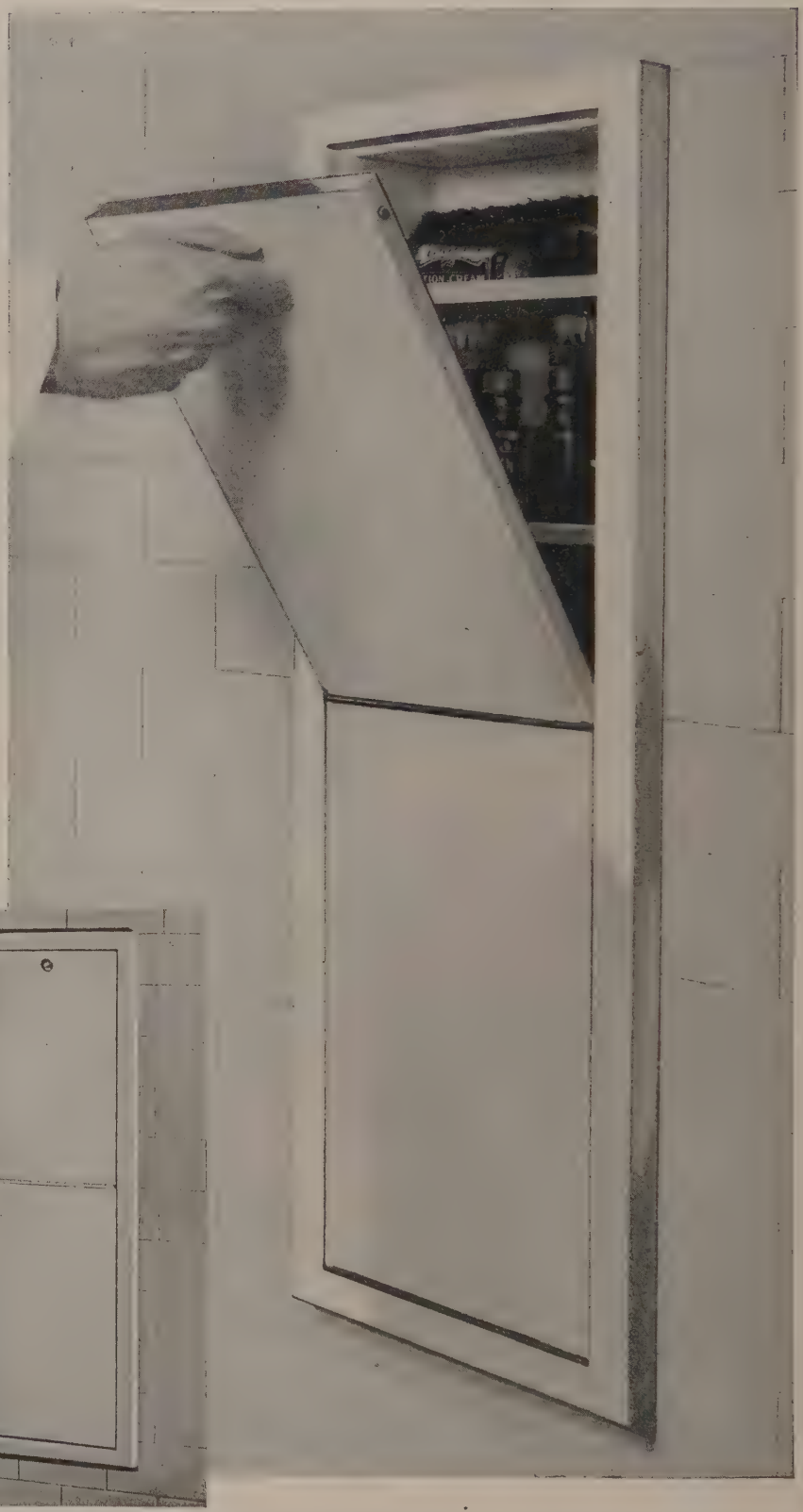
TRIMPAK CORPORATION, 44 Whitehall St., New York, N. Y.

GRIFFINET Cabinets for Shoe Cleaning

Made Exclusively by THE GRIFFIN MANUFACTURING CO., Inc.

67-69 Murray St., NEW YORK, N. Y.

A UNIQUE, MODERN CABINET, *that solves the problem of daily shoe cleaning in the home*

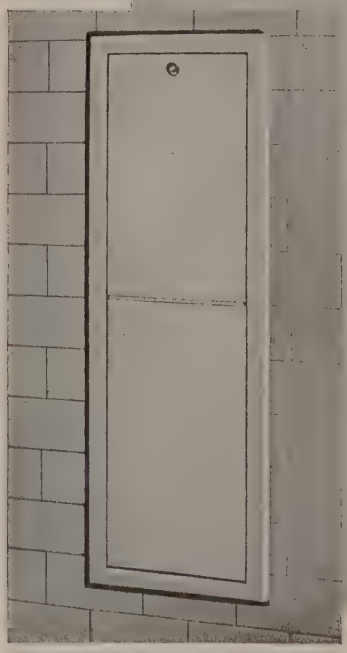


Every home needs shoe grooming equipment. Griffinet is the only fixture made that fills that need in a modern, practical way. Every member of the family will use and appreciate its utility. It makes daily shoe care easy, a pleasing process of a moment then folds back out of the way.

The Griffinet is a modern, compact fixture for bathroom or household use. Its convenience is twofold. *First*—it provides a shelved receptacle for storing bottles, tins, brushes and cloths in one handy and permanent place. They are concealed when the cabinet is not in use—avoiding unsightly disarray, which often occurs when grooming equipment is carelessly kept.

Second—it opens out into a firm, convenient footrest the proper height from the floor. This patented footrest eliminates back strain. You pull the polishing cloth upward—there is no need to bend. Right at your fingertips are the polishes, etc. You can reach them and replace them without changing your position.

A Griffinet Cabinet in the home will save time and avoid annoyance for everyone. They always operate quickly and easily and are built to last as long as your house.



GRIFFINET

Steel Cabinets for Shoe Cleaning

For further details and literature write to

GRIFFIN MANUFACTURING CO., Inc., 67-69 Murray St., New York, N. Y.

GRIFFINET Cabinets for Shoe Cleaning

Made Exclusively by THE GRIFFIN MANUFACTURING CO., Inc.

67-69 Murray St., NEW YORK, N. Y.

Gone are the days when the bathtub rim, the kitchen chair and a towel served for shoe cleaning equipment

Today, homes are modernized for convenience and comfort. Griffinet Cabinets have taken daily shoe care out of the messy, nuisance class and made it a clean, sanitary and sightly operation.

Made in Two Models

Griffinet Cabinets are shipped ready for installation. (1) Wall model for attaching to surface of wall. (2) Inset model to be recessed into wall. They require no special construction, retiling or extra space for installation. They can be installed with a minimum of labor. Their cost is exceedingly moderate.

Features of Construction

(1) Made of heavy 14 gauge furniture steel.
(2) Super-durable, baked-on white enamel finish.
(3) Special nickel plated piano hinges.
(4) Four positive, friction catches insure tight fitting, non-rattling door.
(5) Shelves welded strongly in place—non-adjustable.
(6) Corners are rounded and spot welded.
(7) Fire, moisture and vermin proof.
(8) Ample screws and holes for fastening.
(9) Easily cleaned, will not crack, chip, stain or warp from moisture or heat.

Griffin Established over 38 years

Griffinet Cabinets are a product of Griffin Manufacturing Company—specialists in manufacturing leather dressing and shoe polishing equipment since 1890. Griffin shoe polishes are the foremost "leather dressings" for saving "new shoe complexions." The Griffin Company maintains in these cabinets the same high quality standards of material, design and construction upon which their reputation has been built.

GRIFFINET

Steel Cabinets for Shoe Cleaning

For further details and literature write to

GRIFFIN MANUFACTURING CO., Inc., 67-69 Murray St., New York, N. Y.

"IMPROVED" O. G. FIR GUTTERS

A Product of E. M. LONG & SONS

CADIZ, OHIO

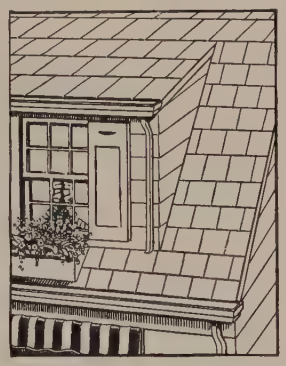
For Every Gutter Requirement:

The "Improved" O. G. Fir Gutter is designed to meet fully all gutter requirements. It is equally desirable for new construction as for remodelling or "modernizing" work and is the ideal gutter for the home.

Advantages:

Everlasting: "Improved" O. G. Fir Gutters are permanent. No other gutter on the market excels their remarkable durability. They are made from clear, soft, old growth yellow Douglas Fir, a wood which has in many instances endured 75 years of exposure without painting. "Improved" O. G. Fir Gutters cannot corrode nor disintegrate when exposed to natural elements, smoke, fumes or acids. They cannot contract nor expand under varying weather conditions. Ice, snow or wind do not tear them loose. Leaning ladders cannot damage them. They are strong and rigid enough to be walked on by carpenter or roofer.

Attractive Appearance: Observe, in this illustration, how the straight horizontal lines and ogee shape improve the appearance of the roof. The ogee design enables the builder to use the "Improved" O. G. Fir Gutter as a part of the cornice profile. This beautiful pattern is much more desirable than the rounded trough or other style gutter.



"Improved" O. G. Fir Gutters Enhance the Beauty of Roof Lines.

Can be Used With Any Type of Construction: "Improved" O. G. Fir Gutters semi or fully concealed are adaptable for use with any type of construction—with open rafters, boxed rafters, with boxed cornice, or brick, wood, or other type of building.

Hard to Clog—Easy to Clean: There are no cross straps nor hangers to interfere with the operation of "Improved" O. G. Fir Gutters, which insures maximum drainage at all times and renders them easy to clean.

Economical: The first cost of "Improved" O. G. Fir Gutters is no more than for the ordinary gutter. In most cases, it is less. No roof mould is necessary and the gutters need be painted once only, when the house is painted. But the biggest economy lies in their durability. Once they are on the house it will not be necessary to buy gutters again. Remember—"They last a lifetime."

Sold Through Retail Lumber Dealers

"Improved" O. G. Fir Gutters are sold through retail lumber dealers. Upon your inquiry we will be glad to furnish the name of our dealer nearest you, and he will give you prompt service on whatever amount or size you specify.

Send for Free Illustrated Booklet

You will be interested in reading our booklet, "They Last a Lifetime." It contains photographs, architect's details for every installation and complete description. Send for your copy now.

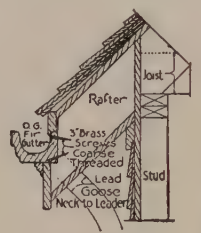
Stock Sizes and Weights

"Improved" O. G. Fir Gutters are manufactured in three convenient sizes: 3x5 inches, 4x6 inches, 5x7 inches, in lengths of ten to forty feet.

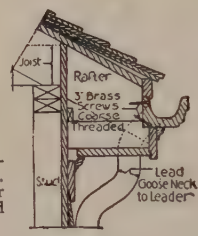
The weights per lineal foot are 1½ lbs., 2 lbs. and 3 lbs., respectively. These sizes supply sufficient range to meet the needs of any type of building.

How to Install "Improved" O. G. Fir Gutters

We *strongly recommend setting all gutters level* for architectural and practical reasons. Architecturally—so that straight horizontal lines can be retained. Practically—because water will always seek its own level and find its outlet at the leader spouts. Short length gutters require one leader. Long length gutters require one or more, according to the area of roof to be drained.



Detail of "Improved" O. G. Fir Gutter with Open Rafters.



Detail of "Improved" O. G. Fir Gutter with Boxed Cornice.

Before installing be sure to give the gutters all over a heavy prime coating of pure white lead and linseed oil, the more oil the better.

Allow to dry thoroughly and they are then ready to put into place.

For connecting down spouts, making spliced joints and miters, we would recommend the use of the following specifications:

All gutters whose finished length will require joints shall be spliced as follows: The two pieces to be joined should be cut on a bevel to fit closely and the raw ends thoroughly saturated with pure linseed oil. The joint should then be sealed together with white lead or roof cement and secured firmly with two brass screws with coarse thread at bottom and two smaller brass screws at top. The screw heads shall be countersunk and puttied.

All miter joints shall be constructed in the same manner as the spliced joints.

For closing the ends, simply return the face mold, using brass screws counter-sunk and puttied, and seal the joint.

NOTE: *"Improved" O. G. Fir Gutters are furnished in lengths as long as 40 feet in all sizes: the necessity of a spliced joint may therefore be avoided on the ordinary size house by using long length pieces.*

Leader down spouts: Where located provide opening for leader down spouts and coat thoroughly with lead and oil. Type of down spout is left to the discretion of the architect, contractor or builder.

To finish, apply the trim color of the building to the exposed outside of the gutter, and give the inside or trough a second or even third coating of good lead and oil paint; there is nothing better for this purpose.

These specifications apply to the installation of gutters as shown by drawings or details in our booklet "They Last a Lifetime." We realize that architects may have different ideas in drawing plans and specifications and contractors may have their own good ideas for making various kinds of miters and joints based on their knowledge and experience, which are equally practical.

E. M. LONG & SONS, Cadiz, Ohio

THE MARSCHKE COMPANY

Manufacturers of MARSCHKE FOLDING STAIRS

ST. PAUL, MINN.

Marschke Folding Stairs:

Marschke Folding Stairs solve the problem of a stairway that will disappear from sight when not in use. The Folding Stairs is concealed by a neat ceiling panel when in closed position. The entire installation is in harmony with any interior decoration scheme.

These stairs are smooth working and easily operated. Properly counterbalanced, they need not be lifted into the ceiling. The space required above the ceiling opening is less than 18 inches. The floor above is entirely free and unobstructed, except for the space taken for the opening. Every Marschke Folding Stairs unit, with the exception of the Junior Model, is complete with panel, casings and jambs, ready for installation. Designed to combine maximum strength with minimum weight. The springs are made of high carbon spring steel, rolled cold, and will outlast the life of the building.

Hinged rigidly to the header by means of heavy "T" hinges, Marschke Folding Stairs eliminate all danger of a slip or fall. With strong hanger arms supporting each side stringer, a light, strong and rigid stairs is made possible.

Guarantee:

We Guarantee the Marschke Folding Stairs to be as represented. Any Folding Stairs not giving satisfactory service, within thirty days after installation, will be replaced with a new stairs or necessary parts. Any defective part will be replaced free of charge at any time.

Models:

Marschke Folding Stairs are made in three models, all sizes of which are carried in stock at all times.

Junior Model:

This model is used where a small opening will serve the purpose. Made of lighter stock than the other models but is amply strong. Jambs and casings are not furnished with this model. Designed to fit between joists whose centers are spaced 24 inches apart, eliminating the extra cost of jambs. This model has a 9 inch "rise" to 4½ inch "run". Made in sizes for varying ceiling heights.

Standard Model:

This model of Folding Stairs is most widely used. Jambs, casings and ceiling panel are fitted at the factory. Shipped complete, ready for installation. Woodwork is well finished and is stained a medium dark brown. Panel and casings are left unstained to be finished to match other woodwork. The "rise" of this model is 8 inches to "run" of 5 inches. Available in sizes for varying ceiling heights.

Special Model:

This model is made entirely of selected materials. The woodwork is finished in golden oak varnish stain, with the exception of the casings and ceiling panel. Casings and panel are of clear fir but may be had of any other wood without extra charge. The finish of the pull-down fixture is also optional. The hardware is sturdy and all aluminized, producing an effect in harmony with the best of homes. Sizes for all ceiling heights from 7′ 0″ to 12′ 0″ inclusive. The "rise" and "run" are the same as in the case of the Standard Model. Any Special Model Folding Stairs may be had in the "white" natural wood, sanded finish but not stained, painted or varnished, without extra charge.

Marschke Folding Stairs in Lowered Position

One Complete Marschke Stairs in Dustproof Carton Ready for Shipment

In Closed Position

SIZES AND OPENING DIMENSIONS MARSCHKE FOLDING STAIRS

No.	Model	Ceiling Height		Rough Opening		Finished Opening		Shipping
		Minimum	Maximum	Width	Length	Width	Length	Weight Lbs.
35	Junior	6′ 8″	9′ 8″	24″	51″	22½″	49½″	70
50	Standard	7′ 0″	10′ 0″	30½″	60″	28″	58″	115
65	Standard	10′ 0″	12′ 0″	30½″	70″	28″	68″	140
75	Special	7′ 0″	10′ 0″	30½″	60″	28″	58″	120
90	Special	10′ 0″	12′ 0″	30½″	70″	28″	68″	145

THE MARSCHKE COMPANY, Dept. C3, St. Paul, Minn.

BESSLER DISAPPEARING STAIRWAYS

Manufactured by THE BESSLER DISAPPEARING STAIRWAY CO.

AKRON, OHIO

See Pages 108 and 109 for Bessler Electric Stairways

Slides Up Into the Ceiling When Not in Use

Only a Neat Panel, as Shown Above, Is Visible from Below

The Bessler solves the space problem in Residences, Summer Cottages, Garages, Stores, Public Buildings

Model 97

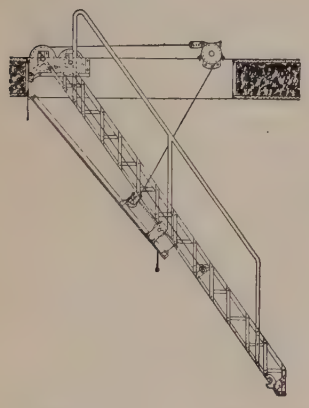
Hand Rail May Be Placed on Either Side

Specifications of Model 97

This is our standard full sized disappearing stairway having about an 18-inch easier run than models 50 and 60. All metal parts are of stamped steel. Panel is hung on adjustable hinges that bring it flush with the ceiling, no matter how wide the floor joists. Panel is left white so it may be finished to match other woodwork. Remainder of stairway is primed with medium dark stain. All heights from 7 ft. 7 in. (floor to floor) to 12 ft. 7 in. Rough openings all 2 ft. 8 in. wide; finished 2 ft. 6 in.; and from 5 ft. 10 in. to 8 ft. 1 in. long, depending on size of stairway.

Bessler All-Steel Disappearing Stairway

Model 250



Fire Proof Burglar Proof

This all-steel disappearing stairway is particularly designed for Banks, Public Buildings, Libraries, and all other buildings where it is essential that the fire hazard be eliminated. The stairway is mounted on rollers that slide on runners mounted on the all metal panel. The panel is suspended on adjustable screw that makes it easy to bring the panel flush with the ceiling. The stairway is perfectly counterpoised by springs enclosed in two drums. Two additional drums enclose springs for counterpoising the panel. Hand rail may be had for either right or left side.

Bessler All-Steel Disappearing Stairways are built to architects' specifications. Send plans and we will submit estimates.

THE BESSLER GUARANTEE

You can have the use of the Bessler for six months, and if it does not prove satisfactory, return it to us at our expense. The Bessler Disappearing Stairway is warranted to last as long as the life of the building.

F. E. BESSLER, President

THE BESSLER DISAPPEARING STAIRWAY CO., Akron, Ohio

BESSLER DISAPPEARING STAIRWAYS

Manufactured by THE BESSLER DISAPPEARING STAIRWAY CO.

AKRON, OHIO

See Pages 108 and 109 for Bessler Electric Stairways

The Lowest Priced Complete Disappearing Stairway Made

Model 50

The Bessler Is the Pioneer; on the Market for a Quarter of a Century

In most every home where more space is desired, that spare bedroom, sewing room, den, play room, or extra storage space can be had by fully utilizing the attic.

An ordinary stairway built to the attic takes up so much valuable space on the floor below as to greatly offset the value of the attic space.

A Bessler Disappearing Stairway solves the problem perfectly. It is a full sized, substantial, good looking stairway that takes up no useful space below, for when not in use, it slides up into the ceiling. There it remains concealed above a neat panel, finished to match the other woodwork of the room.

A gentle pull at the suspended chain opens the panel and allows the stairway to glide smoothly and slowly down into place. It is so perfectly counterpoised by strong springs concealed in drums as to prevent any sudden or jerking movement. A light push starts it back into position. The weight is so nearly taken up by the counterpoise springs that a child can operate it with the greatest ease.

The Bessler adds at least $1,000 to the value of any house by making the attic conveniently accessible. Its cost is but a small fraction of this amount. Any carpenter can easily install a Bessler in a few hours, in either a new or an old house. Clear simple directions for installing come with every unit.

Specifications for Model 50

Model 50 has all the noteworthy Bessler features, but is of lighter materials and is six inches narrower than our standard size Model 97.

Sizes 7 ft. 7 in., 8 ft. 1 in., 8 ft. 7 in. and 9 ft. 1 in. floor to floor, have a rough opening 2 ft. 2 in. by 5 ft. 8 in. and finished opening between jambs 2 ft. by 5 ft. 6 in. Sizes 9 ft. 7 in. and 10 ft. 1 in. require rough opening 2 ft. 2 in. by 6 ft. 2 in. and finished opening 2 ft. by 6 ft. Not furnished in sizes above 10 ft. 1 in. floor to floor.

This is a well made, substantial, good looking stairway, fully covered by our regular guarantee, just the thing for small cottage or bungalow.

Model 60

Excellent ventilation is afforded by leaving the stairway part way down.

Specifications for Model 60

Model 60 is very similar to our Model 50 except that it is made for a wider finished opening.

Sizes 7 ft. 7 in., 8 ft. 1 in., 8 ft. 7 in. and 9 ft. 1 in. floor to floor have a rough opening 2 ft. 8 in. by 5 ft. 8 in. and finished opening between jambs 2 ft. 6 in. by 5 ft. 6 in. Sizes 9 ft. 7 in., 10 ft. 1 in. and 10 ft. 7 in. require rough opening 2 ft. 8 in. by 6 ft. 2 in. and finished opening 2 ft. 6 in. by 6 ft. 0 in.

This model is only furnished in sizes up to and including 10 ft. 7 in. from floor to floor.

Ask any Dealer or send for complete descriptive literature.

THE BESSLER DISAPPEARING STAIRWAY CO., Akron, Ohio

BESSLER *ELECTRIC* STAIRWAYS

(DISAPPEARING)

Manufactured by THE BESSLER DISAPPEARING STAIRWAY CO.

AKRON, OHIO

A touch of the finger to the press button, and the electric motor automatically lowers or elevates the stairway into position.

THE LATEST AND GREATEST IMPROVEMENT IN DISAPPEARING STAIRWAYS

THE BESSLER GUARANTEE

You can have the use of the Bessler for six months, and if it does not prove satisfactory, return it to us at our expense. The Bessler Disappearing Stairway is warranted to last as long as the life of the building.

F. E. BESSLER, President

THE BESSLER DISAPPEARING STAIRWAY CO., Akron, Ohio

BESSLER *ELECTRIC* STAIRWAYS

DISAPPEARING

Manufactured by THE BESSLER DISAPPEARING STAIRWAY CO.

AKRON, OHIO

This new greatly improved disappearing stairway, electrically operated, marks the greatest advance in stairway construction since the invention of the original Bessler Disappear-Stairway a quarter of a century ago.

Model "E"

The Bessler Electric makes use of a built-in electric motor for power to open the panel and lower the stairway into position for use. A touch of a finger to the switch in the wall starts the motor. When the stairway is in position, the motor automatically stops.

Likewise, the stairway is elevated back to its position above the panel in the ceiling by the electrically driven motor, controlled by switches in the wall, one on the floor below, and one on the upper floor.

This improved stairway may afford protection to the occupants of the house against burglars and other undesirable intruders. The lady of the house, for instance, can retire to the upper floor, elevate the stairway by a touch of the finger to the wall switch there, and then, by pressing another button on the switch plate, throw the switch on the lower floor out of control so that anyone on the lower floor will not be able to open the panel and lower the stairway. This assures the occupant on the floor above privacy and security at any time.

It is as easy to lower or elevate this stairway as to turn on or turn off an electric light—just press a button in the wall.

This electric power-operated stairway is positive in operation, simple in construction, and has no delicate parts or adjustments to get easily out of order. It presents no installation problems. Any carpenter can install it in either a new or an old house in a few hours. Complete instructions, easy to follow, are provided with every unit.

The Bessler Electric Disappearing Stairway is guaranteed to give satisfaction or money will be cheerfully refunded.

Send for Specifications and Prices

THE BESSLER DISAPPEARING STAIRWAY CO., Akron, Ohio

UNION METAL COLUMNS

Made by THE UNION METAL MANUFACTURING CO., CANTON, OHIO

Chicago Office: 230 So. Clark St. Los Angeles Office: Detwiler Bldg. New York Office: 110 E. 42nd Street

Products

UNION METAL COLUMNS AND PILASTERS.

UNION METAL
FLUTED STEEL PRODUCTS

Stock and Special Designs

We offer the ten classical designs shown herewith. We also build metal columns and pilasters to conform to architects' details (except Design 240, which is furnished in stock sizes only).

Our portfolio of designs and installations shows many buildings where our columns have been used and a large number of attractive Colonial entrances. Write for Column Catalogue No. 50-C entitled "Union Metal Columns and Pergolas."

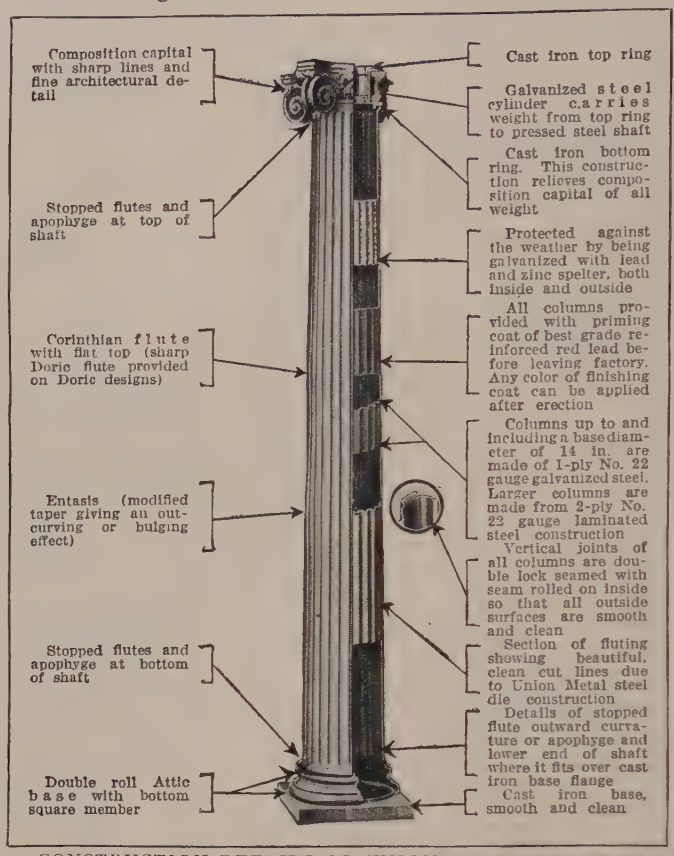
Advantages of Union Metal Columns

(1) Architecturally correct.
(2) Clean cut, highly ornamental and stately.
(3) Will not rot, check or open at joints.
(4) Fireproof and weatherproof.
(5) Have entasis and stopped flutes.
(6) Not experimental, but used on thousands of representative buildings in the United States and abroad.
(7) Indestructible and will outlast the buildings; suitable for all climates and temperatures.
(8) Easily handled, transported and erected because of their light weight.

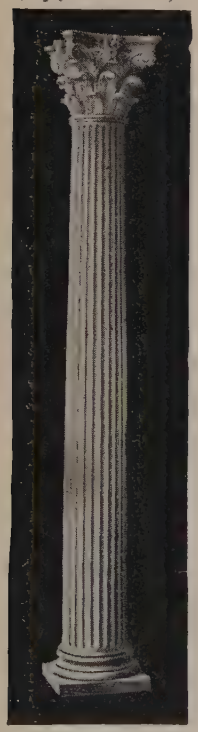
RESULT OF TEST ON UNION METAL COLUMNS
Test made by Robt. W. Hunt & Co.

	*Small column, lb.	†Large column, lb.
Bottom fillet (apophyge) bent at.....	5,840	16,240
Top fillet (apophyge) bent at.....	6,580	16,700
Column buckled near top at (maximum load)	27,220	29,960

*1-ply steel shaft; diameter: base, 8 in.; top, 6½ in.; height 6 ft.
†2-ply steel shaft; diameter: base, 21 in.; top, 19 in.; height, 10 ft.


Composition capital with sharp lines and fine architectural detail
Stopped flutes and apophyge at top of shaft
Corinthian flute with flat top (sharp Doric flute provided on Doric designs)
Entasis (modified taper giving an outcurving or bulging effect)
Stopped flutes and apophyge at bottom of shaft
Double roll Attic base with bottom square member
Cast iron top ring
Galvanized steel cylinder carries weight from top ring to pressed steel shaft
Cast iron bottom ring. This construction relieves composition capital of all weight
Protected against the weather by being galvanized with lead and zinc spelter, both inside and outside
All columns provided with priming coat of best grade reinforced red lead before leaving factory. Any color of finishing coat can be applied after erection
Columns up to and including a base diameter of 14 in. are made of 1-ply No. 22 gauge galvanized steel. Larger columns are made from 2-ply No. 22 gauge laminated steel construction
Vertical joints of all columns are double lock seamed with seam rolled on inside so that all outside surfaces are smooth and clean
Section of fluting showing beautiful, clean cut lines due to Union Metal steel die construction
Details of stopped flute outward curvature or apophyge and lower end of shaft where it fits over cast iron base flange
Cast iron base, smooth and clean

CONSTRUCTION DETAILS OF UNION METAL COLUMNS

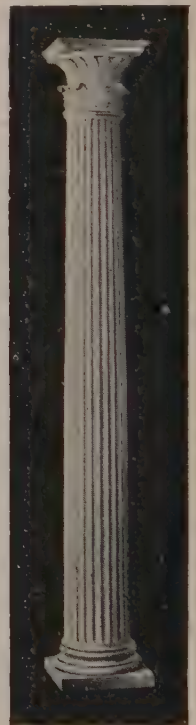


Design 212
Roman
Corinthian

Design 230
Greek
Ionic

Design 237
Modern
Ionic

Design 222
Italian Ionic
(Scamozzi)



Design 213
Temple of the
Winds

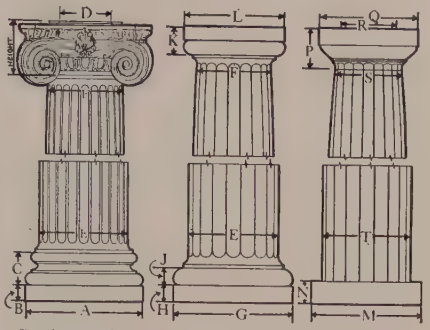
THE UNION METAL MANUFACTURING CO., Canton, Ohio

Architects' Specification

The fluted columns used shall be Union Metal Pressed Steel Columns with entasis and stopped flutes, manufactured by THE UNION METAL MANUFACTURING CO., Canton, Ohio. The design number, style and size of columns to be used are indicated on drawings. The manufacturer shall apply a priming coat of high grade metallastic paint to all columns before shipment from his plant.

Pilasters and Odd Shaped Columns

We can furnish flat and corner metal pilasters and half-round and three-quarter round metal columns in all sizes to match stock or special designs of Union Metal Columns.



Designs 212, 230, 237, 222, 213, 219 and 224 | **Designs 240 and 246** | **Design 700**

A—Quarter return pilaster

B—Half return pilaster

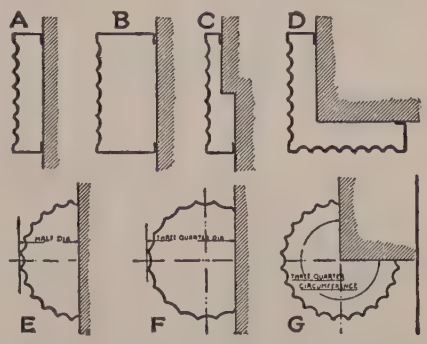
C—Unequal return pilaster

D—Quarter return corner pilaster

E—Half column

F—Three - quarter column

G—Three - quarter corner column



UNION METAL PILASTERS AND ODD SHAPED COLUMNS

When ordering pilasters, specify whether face shall be tapered to match columns or whether face shall be straight from top to bottom. Unless otherwise ordered, bottom and top faces of pilasters will be furnished same as bottom and top diameters of columns, in which case pilaster bases and caps will match those of columns in height. Pilasters with straight face entail extra cost. All Union Metal Pilasters are fluted on front face to match columns but are not fluted on return faces unless specially ordered. Fluted returns of pilasters entail extra cost. Pilasters are furnished with straight side face or straight tapered face and are not provided with entasis.

DIMENSION CHART FOR UNION METAL COLUMNS

Bott. Dia. Shaft	DESIGNS No. 212, 230, 237, 222, 213, 219 and 224												DESIGN No. 240					DESIGN No. 246						DESIGN No. 700						
	A	B	C	D	E	F	HEIGHT OF CAPITAL						G	H	J	K	L	G	H	J	K	L	R	M	N	P	Q	R	S	T
							212	230	237	222	213	219	224																		
8	10 3/8	1 1/16	3	5 1/16	8	6 1/2	9 7/16	6 1/16	4 1/8	4 1/16	8 7/16	11 3/16	4 1/16	11	1 1/16	1 1/2	2 1/2	8 5/8	10 1/16	1 11/16	1 11/16	4 3/8	9 3/4	5							
10	13 11/16	1 11/16	3 3/8	6 1/4	9 3/4	8	13 1/16	9 1/16	6 1/16	5 1/16	12 11/16	13 1/16	6 1/16	13 1/4	1 11/16	1 7/8	3 1/2	11	13 1/4	2 1/16	2 1/16	5 1/16	12	6 1/4	12 1/4	2 1/2	4 5/8	10 7/8	5 1/4	7 1/2	10
12	16	1 11/16	4 1/16	7 1/8	12	10	15 1/8	11 3/8	6 1/8	5 5/8	15 5/8	15 5/8	7 5/8	16	2 1/16	2 1/4	3 11/16	13 1/4	15 7/8	2 7/8	2 11/16	6 1/4	14 7/8	8	14 3/8	3	5 1/8	13	6 1/2	9	12
14	18 5/8	2 1/16	4 3/4	9 3/8	14	12	16 3/4	13 1/4	7 3/4	6 3/4	16 1/4	19 1/4	8 3/4	18 5/8	2 5/16	2 3/4	4 1/16	16	18 1/2	3 3/8	3 3/8	8	18	9 1/2	16 5/8	3 3/8	6 1/2	15 1/2	7 1/4	11	14
16	20 5/8	2 1/16	5 1/16	9 3/8	15 3/4	12	16 3/4	13 1/4	7 3/4	6 3/4	16 1/4	19 1/4	8 3/4	----	----	----	----	----	20 1/2	3 3/4	3 3/4	8	18	9 1/2	18 3/8	3 3/8	7 1/16	16 3/4	7 3/8	12	16
16	20 5/8	2 1/16	5 1/16	10	15 3/4	14	18 1/2	15 3/4	10	8	21 1/4	22 1/2	11 3/4	----	----	----	----	----	20 1/2	3 3/4	3 3/4	9 3/8	21	10	----	----	----	----	----	----	----
18	22 1/16	2 1/16	5 1/16	10	17 3/8	14	18 1/2	15 3/4	10	8	21 1/4	22 1/2	11 3/4	----	----	----	----	----	22 7/8	4 1/16	4 1/16	9 3/8	21	10	20 5/8	4 1/4	8 1/16	19 1/4	8 3/4	14	18
20	25 7/8	3 1/16	6 1/16	12 1/2	19 1/2	15 3/4	24 1/16	17 7/8	11 3/8	8 1/16	----	24 7/8	11 7/8	----	----	----	----	----	25 5/8	4 1/16	4 1/16	10 3/8	23 5/8	12 1/2	23 3/8	4 3/4	8 7/16	20 1/2	9 1/4	15	20
20	25 7/8	3 1/16	6 1/16	14	19 1/2	17 3/8	26 1/16	17 7/8	12 3/8	9 1/16	23 7/16	27 7/16	13 7/16	----	----	----	----	----	25 3/4	4 1/16	4 1/16	11 1/4	26	14	----	----	----	----	----	----	----
22	28 3/4	3 3/4	5 3/8	14	22	17 3/8	26 1/16	17 7/8	12 7/16	9 1/16	23 7/16	27 7/16	13 7/16	----	----	----	----	----	29	5 1/4	5 1/16	11 3/4	26	14	25 7/16	5	9 1/4	24	9 3/4	17	22
24	32	4	6 3/4	15 1/2	23 1/2	19 1/2	29 1/16	20 1/16	12 7/16	10 1/16	26 7/16	29 1/16	15 5/16	----	----	----	----	----	31	5 5/8	5 1/16	12 3/4	29 1/4	15	27 1/2	5 1/2	10 1/16	24 3/8	10	18	24
26	34 1/2	4 5/8	7 1/16	15 1/2	25	19 1/2	29 1/16	20 1/16	12 7/16	10 1/16	26 7/16	29 1/16	15 5/16	----	----	----	----	----	33	6	6	12 3/4	29 1/4	15	30	6	12	28 3/8	13 1/2	20	26
26	34 1/2	4 5/8	7 1/16	17	25	22	32 7/16	21 1/16	12 7/16	12 1/16	----	32 7/16	16 9/16	----	----	----	----	----	33	6	6	14 3/8	33	15 1/16	----	----	----	----	----	----	----
28	37	5 1/16	8 1/16	17	26 7/8	22	32 7/16	21 1/16	12 7/16	12 1/16	----	32 7/16	16 9/16	----	----	----	----	----	35 1/2	6 1/16	6 1/2	14 3/8	33	15 1/16	32	6 3/8	13 1/4	31 3/4	15	22	28
30	39	5 1/2	9 1/16	18 3/4	29 1/4	23 1/2	35 7/16	23 1/16	12 1/4	13 7/16	----	35 7/16	17 3/8	----	----	----	----	----	38 1/2	7	7	15 3/8	35 1/4	18	34 1/2	6 7/8	14 1/2	34 3/4	16	24	30
32	41 1/2	6	10 7/8	20 1/4	31 7/8	25	39 1/16	24 1/16	13 1/16	14 1/16	----	36 1/16	18 1/16	----	----	----	----	----	42 1/2	7 1/16	7 1/16	16 1/4	37 1/2	19 1/2	36 3/4	7 3/8	14 1/2	34 3/4	16	24	32
34	43	6 1/16	10 3/4	22	34	26 7/8	42	26	16	15	----	40	----	----	----	----	----	----	44 1/2	8 1/16	8 1/16	17 1/2	40 3/8	22	39	7 3/4	16 1/2	43	18	28	34
36	45 1/16	6 1/2	11 3/4	23 3/4	36	29 3/4	42 1/8	28 1/8	18 1/8	16 1/16	----	42 1/8	----	----	----	----	----	----	47 1/2	8 5/8	8 11/16	19 1/16	43 3/4	23	41 1/2	8 3/4	16 1/2	43	18	28	36
42	56	7	14	27	42	34	----	----	19 3/4	----	----	----	----	----	----	----	----	----	55 3/4	10	10 5/16	----	----	----	----	----	----	----	----	----	----

All stock designs (except Design 240) are made in all sizes from 8 to 42-in. diam., and from 5 to 35 ft. high. Design 240 is made in 8 to 14-in. diam. only. Columns with diameter greater than 42 in. and higher than 35 ft. are specially constructed.

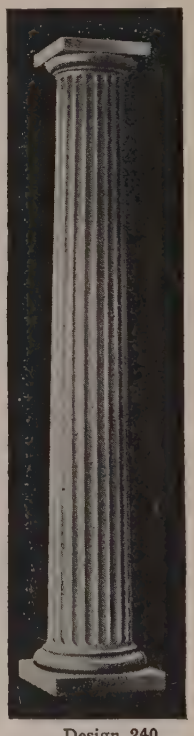
*D and R dimensions represent opening through capital.

Design 219
Italian
Composite

Design 224
Roman Doric
Diocletian

Design 246
True
Roman Doric

Design 700
Greek
Doric



Design 240
Modern-steel
Doric

THE UNION METAL MANUFACTURING CO., Canton, Ohio

Sedgwick Dumb Waiters and Elevators

Manufactured by SEDGWICK MACHINE WORKS

134 West 15th Street, New York

Factory—Poughkeepsie, New York

Representatives in Many Principal Cities

Homes equipped with one or more of the many types of Sedgwick Hand Power Dumb Waiters and Elevators are more livable. They are also more easily sold, for prospective buyers who are up-to-date will readily appreciate how Sedgwick Dumb Waiters, Fuel Lifts, Trunk Lifts, Ash Hoists and other outfits save labor and effort and how they protect woodwork, doors, stairs, floors and other parts of the house subject to damage whenever objects of any size or weight are moved.

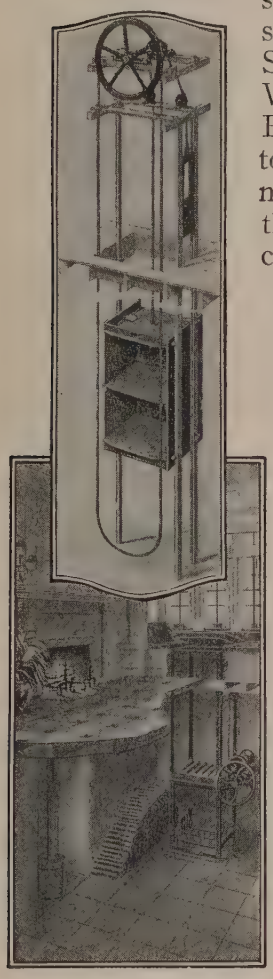
OUR MOTTO

The profit in any sale is of less importance than the opportunity the transaction affords to make of the purchaser a permanent customer and friend.

The universally recognized superiority of Sedgwick Dumb Waiters and Elevators is due to the high-grade materials used in their manufacture and to exclusive improvements in design and workmanship. Sedgwick machines run on and on, year after year, providing the utmost in economy because of their strength, durability and ease of operation.

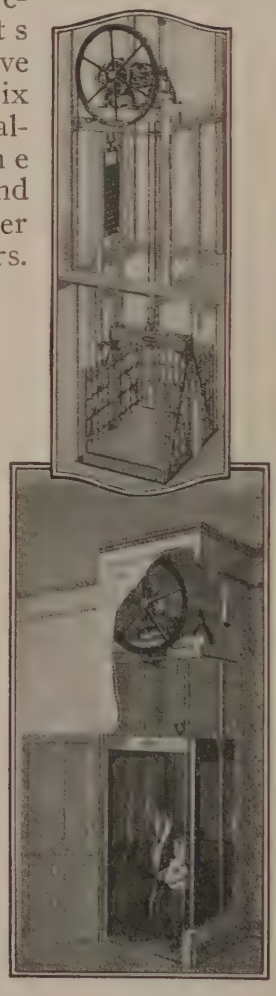
The greatest satisfaction is assured by the selection of the outfit exactly suitable to the conditions and requirements of service. Consequently we take a personal interest in making recommendations which shall secure to our customers the best results. Our vast collection of drawings shows outfits designed for special conditions and requirements which we have met in thirty-six years of specialization in the manufacture and installation of hand power dumb waiters and elevators.

Dumb Waiter



Fuel Lift

Trunk Lift



Invalid Elevator

Four Sedgwick Outfits Shown

Sedgwick Dumb Waiters are a wonderful convenience in the home. The Automatic Brake assures absolute safety in operation. Recent Sedgwick improvements have lessened the number of parts, making the outfits easier to install and doubling the life of the car cable.

Sedgwick Fuel Lifts make fireplaces usable, doing away with the muss and fuss of carrying wood through the house. An attractive feature with which more homes are being equipped each year.

Sedgwick Trunk Lifts appeal to those who have seen walls gouged, stair rails broken and doors and trim marred by carrying trunks and other heavy objects from one floor to another.

Sedgwick Invalid Elevators are a blessing to persons who cannot or should not climb stairs. They make the entire house accessible to invalids otherwise confined to a single floor. Easily operated and absolutely safe.

Sedgwick Service

OUR SERVICE DEPARTMENT will gladly send you catalog, blueprints, specifications and full details of outfit in which you are interested. Write for Form 136, which outlines information needed by us to recommend the exact outfit that will give best results in operation.

Your copy of our New Catalog is ready to be mailed
Also new folder: "A Necessary Factor in the Complete Home"

SEDGWICK MACHINE WORKS, 134 West 15th St., New York

FAIN FOLD-AWAY DINING SETS

Manufactured by FAIN MANUFACTURING COMPANY, Inc.

626-630 West 23rd Street, NORFOLK, VIRGINIA

New York Sales and Show Room—19 West 44th Street, Room 601

Chicago Sales and Show Room—L. V. Whitney, Distributor, 236 East Erie Street

Agents in All Principal Cities

The backs on the seats and the attractive design of The Plymouth put it in the class with the best period furniture, with which it harmonizes perfectly.

The table and benches are made of red gum finished in light walnut or painted to order; other parts of No. 1 white pine, or in all red gum (finished) at small extra cost.

The baseboard is cut out and cabinet screwed to the wall with brackets provided. The Plymouth is also made for recessing in a 3¾-inch stud wall.

The Plymouth (Left)

This new design in Fain Fold-Away Furniture provides convenient, adequate dining accommodations for the house or apartment without either a dining room or a dining alcove, or. . . .

It converts the dining alcove into a multi-purpose room, permitting the space to be used as a playroom, den or sewing room when the set is not in use for dining.

The design of this unit harmonizes with the best period furniture, the details of the table and cabinet being inspired by a Colonial table, a secretary desk and an old grandfather's clock in the American Wing of the Metropolitan Museum of Art in New York City.

Another distinguishing feature of The Plymouth is the backs on the seats, which enable their occupants to sit and dine in comfort. A folding seat with a back is an unequalled innovation in equipment of this kind.

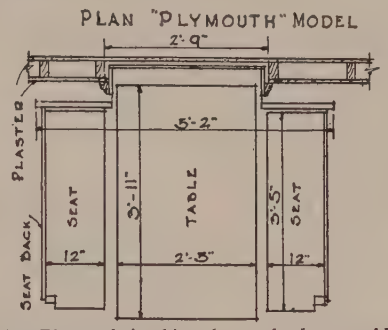
As illustrated, The Plymouth is shown in cabinet type, as it sets against the wall. The set is available, however, without backs on the seats and can be installed in a recess in the wall enclosed by five-light French doors.

Model "L" (Right)

Here is a breakfast set that eliminates the need and expense of even a dining alcove in the small house or apartment. It goes directly in the kitchen.

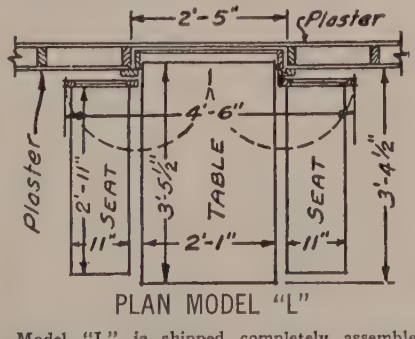
When not used for dining, the table serves as a regular kitchen table, because it has a porcelain top.

The interior parts are made of brass; the cabinet and doors of No. 1 white pine. The set is shipped painted in buff, green, white or gray, or unpainted.



The Plymouth is shipped completely assembled with internal hardware in nickel; exterior hardware in dull brass ready to install; glass for doors furnished, not installed.

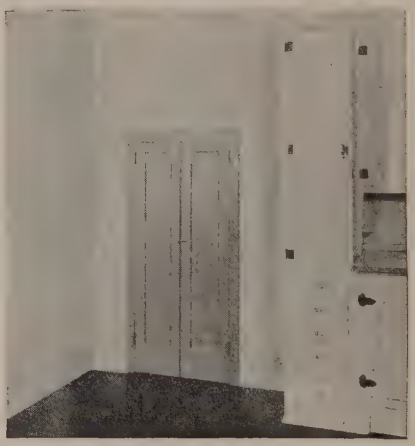
"Rough opening 2' 9" wide by 5' 10" from finished floor, by 4" from face of finished plaster."



Model "L" is shipped completely assembled with both internal and exterior hardware in nickel.

"Rough opening 2' 5" wide by 5' 3½" high from finished floor, by 4" deep from face of finished plaster."

An ideal dining set for the kitchen of the house or apartment without dining room or dining alcove. The porcelain top makes an excellent kitchen table between meals.



As on The Plymouth, the legs on the table of Model "L" are automatic in operation. A patented floating hinge takes all weight off the doors when the seats are let down.

Model "L" when folded away behind its attractive paneled doors, leaves the kitchen floor unencumbered. A rough opening only 2'5"x 5'3" is required.

FAIN MANUFACTURING COMPANY, Inc., Norfolk, Virginia

KITCHEN MAID STANDARD UNIT SYSTEM

Made by WASMUTH-ENDICOTT COMPANY

ANDREWS, INDIANA

Products

Kitchen Maid Standard Units—including Kitchen Cabinets, Refrigerators, Dish and Broom Closets, Linen Cupboards, Folding Ironing Boards, Dinofolds, Divider Cupboards, Telephone Niches and Complete Kitchenette Assemblages (including range and refrigerator).

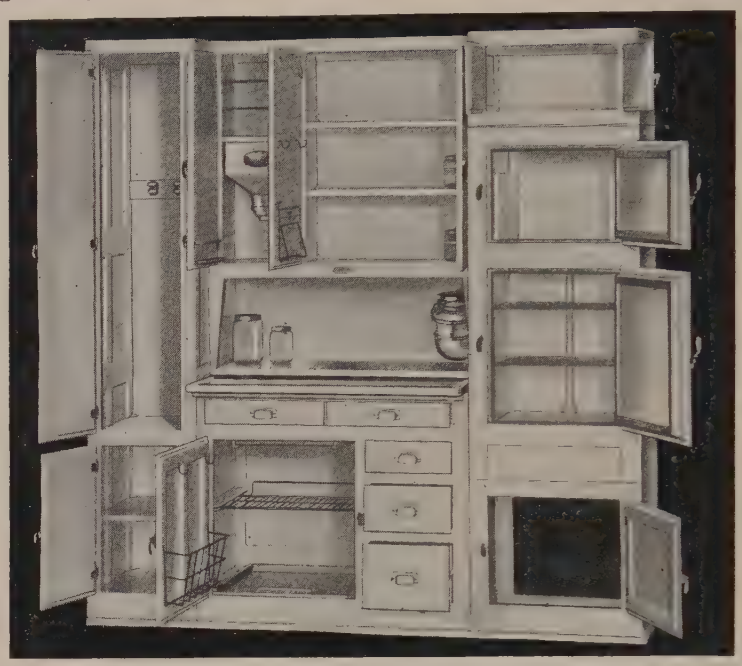
Kitchen Maid Standard Unit System

The Kitchen Maid "Unit Idea" organizes the kitchen into a complete, efficient system of compact storage and working equipment. It includes units which cover every kitchen need—each unit complete in itself, yet so designed that it can be used either alone or in combination with other units.

Kitchen Maid Standard Units are built to conserve space, save labor, organize kitchen work, and make the kitchen generally more efficient, clean, and beautiful. They may be used singly or in group assemblages. They will fit into practically any size of space in kitchens already built or may be built into a kitchen especially designed to receive them.

Kitchen Maid units represent the highest development in cabinet-making skill. They are built from carefully kiln dried woods. Smooth door construction eliminates old-fashioned panelling. All interior corners are rounded, leaving no space for dust and dirt to collect. Combined with concealed hinges, the smooth door construction and rounded inside corners assure the highest degree of cleanliness.

In addition, all Kitchen Maid units are supplied with 2" front frames, allowing doors to swing fully open. All shelves are ¾" thick, making sagging next to impossible. All latches and strikes are made of heavy cast brass, heavily nickel plated. They will not rust or lose their bright finish. All shallow drawers are made of enameled heavy gauge steel with wood fronts. This construction gives exceptional strength and rigidity. All pot and pan compartments in Kitchen Maid cabinets are finished and enameled inside—resulting in better appearance and added cleanliness.



Combination consisting of Utility Cupboard No. U-200, Kitchen Cabinet No. K-40, Refrigerator Base No. C-24, Refrigerator No. 2449, Top Cupboard No. T-2413.

Kitchen Maid Combinations

The combination shown here is only one of the many attractive and practical arrangements made possible by Kitchen Maid Standard Units. With the exception of stove and sink, it provides all the necessary units of kitchen equipment on one wall space. Made up of broom closet, kitchen cabinet, refrigerator, and top cupboard—it brings everything within easy reach of the busy housewife. It represents the highest degree in compactness, efficiency, and convenience.

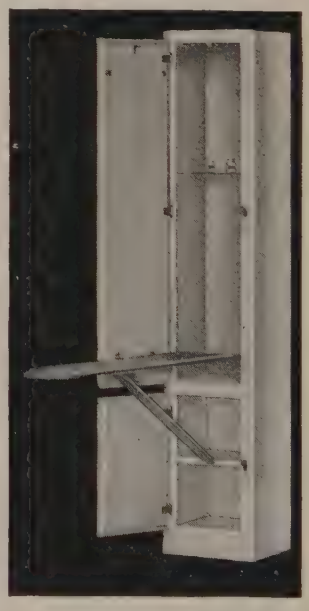
Kitchen Maid Kitchen Cabinet No. K-48.

Kitchen Maid Colors

Kitchen Maid Units are finished in a choice of five attractive colors—Cactus Green, Pastel Green, Travertine Ivory, Dove Gray, and Shasta White—all exclusive Kitchen Maid finishes. If desired, Kitchen Maid Units may be secured in one coat of flat undercoat.

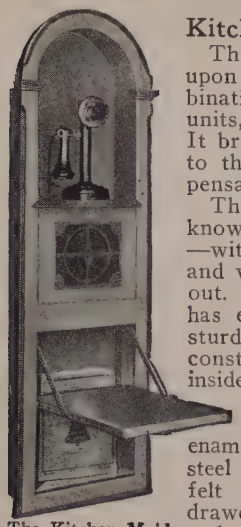
Broom Closet and Folding Ironing Board Combined

Here is a unit which fits in any kitchen or cabinet combination. It does not require a special opening in the wall. It sets anywhere. It holds an average vacuum cleaner, brooms, mop, and has a shelf for cans of polish or the electric iron. The ironing board is suspended from a metal bracket and folds up flat against the door when not in use.



Utility Cupboard No. U-101 . . . . combining broom closet and ironing board.

WASMUTH-ENDICOTT COMPANY, Andrews, Indiana

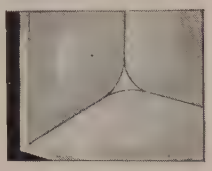


The Kitchen Maid Telephone Niche . . . a unique built-in unit that adds the final touch of convenience to home or apartment. The chair folds out of sight when not in use.

Kitchen Maid Kitchen Cabinets

The Kitchen Maid cabinet is the basis upon which nearly all Kitchen Maid combinations are built. Alone or with other units, it is the center of kitchen activities. It brings such convenience and cleanliness to the kitchen that it is practically indispensable.

The Kitchen Maid cabinet is widely known for the sturdiness of its construction—with every joint dovetailed or tenoned, and well seasoned hardwood used throughout. In addition, it has exceptionally sturdy frame and shelf construction, rounded inside corners for cleanliness, small drawers made of enameled heavy gauge steel with wood fronts, felt lined silverware drawer, no-panel door and drawer construction, glass condiment set, flour bin, bread drawer, and many other advantageous features.



All interior cupboard corners are rounded out with Kitchen Maid rounded inside corner blocks, making them as easy to clean as the inside of a cup.

Kitchen Maid Refrigerators

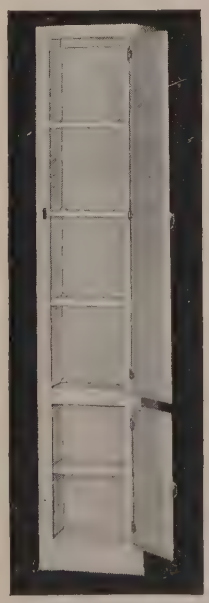
Kitchen Maid all steel Refrigerators . . . handsome, compact, and substantial . . . are built with the same care and precision that has made the entire Kitchen Maid line famous. The materials, finish, and workmanship are of the very highest type.

Good insulation, the most important requisite, is insured by the use of two inches of Armstrong's Nonpareil Corkboard (dipped in odorless asphalt) and a ¾" dead air space. Steel-clad doors and a fine enamel finish assure external beauty and cleanliness. Linings of galvanized iron, enameled in the food compartments, bring internal cleanliness and years of rust-resisting service. Each box is equipped with Universal hangers for cooling coil and has mechanical refrigeration boring.

Combination consisting of Wall Cupboard No. W-24 and Refrigerator No. R-2435 elevated on base No. C-24.

Dish Cupboards

Kitchen Maid Dish Cupboards fit in any kitchen or cabinet combination. They occupy little wall space, yet they offer the utmost in convenience and efficiency.



Dish Cupboard No. D-102.

These cupboards are made in two different styles. No. D-102 and D-202 are made up completely of shelves . . . four in the top section and two in the bottom. This cupboard will hold a large supply of china and glassware. No. D-203 has three shelves in the top section and two in the bottom. In the center of this cabinet, there is a metal bread drawer and three small drawers for silver and kitchen cutlery. All dish cupboards are 16½" wide and 84¾" high. No. D-202 and D-203 are 21½" deep and No. D-102 is 13" deep.

Kitchen Maid Dinofold

The famous Dinofold, now a Kitchen Maid product, provides an attractive, convenient breakfast nook that appears when you want it and vanishes when no longer needed.

The Dinofold may be attached wherever it is most convenient . . . to a wall or a door. Unfolded, it furnishes a roomy breakfast or luncheon table with comfortable seats; folded, it is a compact unit that occupies no floor space. It folds or unfolds with two simple operations.

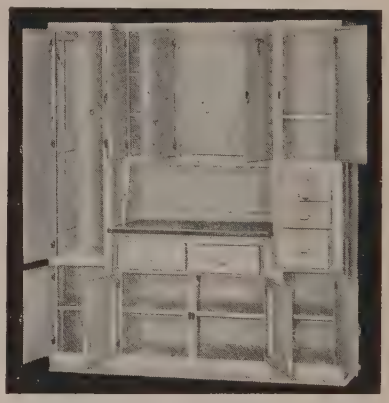
The Dinofold Model 41, wall type. Uses wall space 48⅜" wide and 69" high. Only four screws are necessary. When folded, the Dinofold is only 4¼" thick by 24" wide.

The Dinofold is attractively and solidly built. It never rattles or becomes wobbly. Special hardware holds it firmly to the door or wall. Strong screws secured in hardwood dowels make the Dinofold exceptionally rigid when unfolded. Extra heavy piano hinges operate the table and two seats in perfect unison when the Dinofold is raised or lowered.

Kitchen Maid Butlery Combinations

In the home or apartment where there is a large kitchen, pantry, or service hall, nothing is more convenient nor more attractive than a combination of Butlery Units.

Here in the upper cupboards is space for large supplies of china and glassware. In the lower sections are deep, roomy linen drawers, cutlery and silver drawers, and added cupboard space. The counter top is of linoleum or laminated maple, very practical and attractive. Units are standardized and embody all the famous Kitchen Maid Features of construction and equipment.



The Butlery . . . for large kitchens, service halls and pantries. This Butlery combination consists of Utility Cupboard No. U-200, Butlery Unit No. B-40, and Dish Cupboard No. D-203.

Write For Our New Fully Illustrated Catalog

KITCHEN MAID
STANDARD UNIT SYSTEMS

WASMUTH-ENDICOTT COMPANY, Andrews, Indiana

Heat, Cold and Sound-Deadening Insulation For Buildings

SAMUEL CABOT, INC.
141 Milk Street, Boston, Mass.
FOR STAINED SHINGLES SEE PAGE 61

Cabot's Quilt

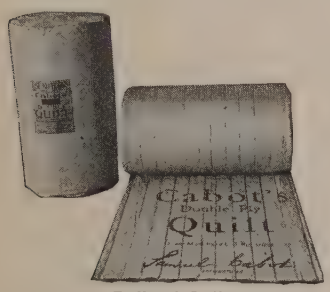
Samuel Cabot
Incorporated

Purposes:

For insulating houses and other buildings to make them warm in winter and cool in summer; for insulating cold storage and icehouses, breweries, refrigerators, etc., and for deadening sound in floors and partitions of apartments, schools, hospitals, lodges, etc.

Description:

Quilt is a felted matting of *zostera marina,* a marine plant, stitched between two layers of very strong Kraft paper. It will sustain a pull of almost 900 lb.



Rolls of Quilt
Rolls of 250 sq. ft., 1 yd. wide
Divides into 18 in. strips

Ribbons of fiber cross each other at every angle, making small cells of dead air. Quilt is a cushion of these air spaces. These give perfect conditions for insulating heat and deadening sound. Dead air can not circulate, preventing heat conduction; and sound waves are broken up and absorbed.

Grades:

"Quilt" is regularly made in 5 grades, as follows:

Grade	Thickness, In.	Weight, lb. (per roll of 250 sq. ft.)
Single-ply	About 1/8	About 40
Single-ply waterproof	About 1/8	About 45
Double-ply	About 1/4	About 65
Double-ply waterproof	About 1/4	About 70
Triple-ply	About 3/8	About 90

Efficiency:

Tests made in 1927, at the U. S. Bureau of Standards, Washington, show that there are only two other insulators, irrespective of cost, which equal Cabot's Quilt in insulating value. The Bureau of Standards' tests, made by the plate method, show a transmission coefficient of .25 for 1 in. of Quilt. By the air-to-air method, ½ in. of Quilt has a coefficient of .26, this being with double-ply Quilt.

Tests made by Prof. G. B. Wilkes at the Massachusetts Institute of Technology, 1926-1927, give the following:

RELATIVE HEAT CONDUCTIVITY OF STANDARD WALL AND ROOF CONSTRUCTIONS—WITH AND WITHOUT CABOT'S QUILT INSULATION—SINGLE-PLY

Construction	Conductivities		Heat saving, per cent
	Not insulated	Insulated	
Standard Wall Construction			
Clapboard, sheathing, studding, lath, plaster	0.28	0.16	43
8-in. brick, furring, lath, plaster	0.27	0.16	41
4-in. tile, stucco outside, plaster inside	0.40	0.20	50
Stucco, studding, plaster	0.45	0.21	53
Standard Roof Construction			
Tar and gravel on 4-in. concrete	0.60	0.24	60
Tar and gravel on 2-in. wood plank	0.26	0.16	39
Tile or slate on wood sheathing	0.82	0.27	67

One layer of double-ply Quilt is a better insulator than 12 in. of solid brickwork and far better than 12 in. of stone or concrete.

Sound Deadening:

Thousands of apartments, schoolhouses, hospitals, etc., have been successfully deadened in partitions and floors with Cabot's Quilt. It breaks up and absorbs sound waves. Most exhaustive practical tests made by Prof. C. L. Norton of the Massachusetts Institute of Technology for the New England Conservatory of Music showed Quilt far superior to all other materials tested.

Permanency:

Insulators and sound deadeners should be as permanent as the building itself.

Cabot's Quilt will not get foul or rot, nor harbor insects or vermin. (See old Pierce House below.) Quilt has been in use over 35 years without deterioration.

Old Pierce House, Dorchester, Mass.
Built About 1635

The walls of the old Pierce House, Dorchester, Mass., were stuffed with *zostera marina* when the house was built about 1635, and the grass is still in a perfect state of preservation. We have a sample of this 290-year-old insulation in our office.

Fire Resistance:

Quilt is highly fire resistant. This has been proved in many buildings.

Flexibility:

Quilt is flexible and will fit any surfaces, corners, projections or jogs.

Application:

Cabot's Quilt can be applied at the lowest labor cost like any common felt or paper. It is preferable to apply it between studs and rafters inside a house rather than directly under shingles, slate or clapboards. It goes around corners without cracking, it can be cut easily with an ordinary knife or shears and requires no skill in application.

Adaptability:

Single-ply is for lining houses and for all other ordinary heat insulation.

Double-ply is for house insulation and sound deadening.

Triple-ply is the best for cold storage and for deadening and other work where unusual conditions prevail.

Quilt for Sound-Deadening:

Sound-deadening problems frequently require special investigation. Samuel Cabot, Inc., is always ready to cooperate on sound-deadening problems.

Samples:

Samples of Quilt, with full information, promptly furnished on request.

SAMUEL CABOT, INC., 141 Milk St., Boston, Mass.

CELOTEX
BRAND
INSULATING CANE BOARD

HOW IT IS USED IN MODERN BUILDING

SCIENCE has discovered that the usual building materials, such as Wood, Brick, Stone, Concrete, Plaster, etc., when used alone, offer little resistance to the passage of heat and cold. Careful experiments show that there is an avoidable heat loss of from 25% to 60% right thru the walls and roofs of homes built with the ordinary materials alone.

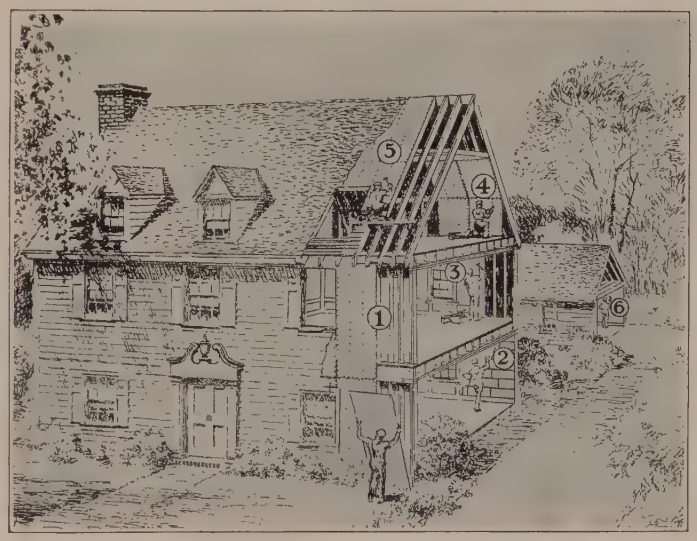
Solid construction is not enough and much too costly. A special heat-stopping or insulating material is needed. Now this protection is available for every home, old or new.

Celotex Insulating Cane Board means economical insulation effectively resisting the passage of both heat and cold. Because Celotex replaces other materials in buildings it is not an extra item, therefore costs little or nothing extra. As an insulation Celotex is 3 times as effective as wood, 8 times plasterboard, 12 times brick and 25 times concrete. More than 250,000 buildings are insulated with Celotex, making them warmer in winter and cooler in summer, stronger and quieter. In buildings properly insulated with Celotex, smaller heating plants may be used.

CELOTEX STANDARD BUILDING BOARD

Description: Celotex Insulating Cane Board is made from the long, tough fibres of cane into big, strong boards 7′ to 12′ long, 4′ wide, and 7/16″ and 7/8″ thick, weighing approximately 60 pounds to the 100 square feet. Sterilized and waterproofed in process of manufacture. Tests show the thermal conductivity as being 0.33 B.t.u. per hour, per square foot, per degree F., per inch thickness. Principal uses

1. *As Sheathing*—replacing wood and paper. See page 138. "Celotex for Sheathing".
2. *As lath under plaster*—replacing wood and metal lath and plaster-board. See page 125.
3. *As interior finish*—plain or decorated. See page 291.
4. *As roof and attic insulation.*—See page 118.
5. *As garage insulation*—Use as for interior finish. See page 291.



HOW CELOTEX IS USED—1. As sheathing, replacing wood lumber and building paper. 2. CELOTEX LATH, replacing other forms of lath. 3. As interior finish. 4. As attic lining. 5. As roof insulation. 6. As garage lining.

CELOTEX LATH

Celotex Lath is a superior plaster base plus insulation, presenting an ideal surface for plastering. It is the only lath made from the long, tough fibres of cane. These fibres protrude from the surface and become imbedded in the plaster forming a secure and permanent bond. Celotex Lath is especially designed to reinforce against plaster cracks and eliminate lath marks, thereby permanently protecting the beauty of plastered walls and ceilings. Then, too, it gives insulation, the indespensable requirement for year round comfort in the home.

Celotex Lath is 18″ x 48″ and 7/16″ and 7/8″ thick. It comes tied in bundles of 15 laths, 90 square feet, or 10 square yards, weighing approximately 70 pounds per bundle.

SOUND INSULATION

Celotex Insulating Cane Board is a practical and economical material for insulating floor, walls and partitions against sound. Celotex and plaster partitions have been found by test to be more opaque to sound than ordinary plastered partitions. There are many factors that determine the effectiveness of partitions and floors in excluding the passage of sound from one room to another. For more detailed information including specifications, details and tests on Celotex for sound insulation, write for Technical note No. 10-A—Celotex for Sound Insulation.

When you buy a house look for this sign. It is your assurance of new home comfort.

Because of the high insulating value of Celotex Insulating Cane Board, it is being recommended and specified by leading Architects and Contractors for insulating roofs and attics. For insulating homes Celotex can be applied either under or over the roof rafters, or both. Any kind of roof covering may be used over Celotex. See page 88, Celotex for insulating roofs and attics. For insulating flat roofs of commercial and industrial buildings, over any type of roof deck, under any type of roof covering, write for "Specifications and Details for Celotex Roof Insulation Board."

Note: For complete information write to the Celotex Company.

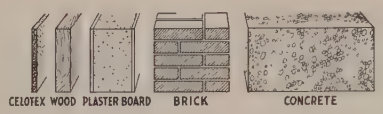
THE CELOTEX COMPANY, 645 N. Michigan Ave., Chicago, Ill.

CELOTEX
BRAND
INSULATING CANE BOARD

FOR INSULATING ROOFS AND ATTICS

HOMES already built can still be economically insulated and made comfortable by lining the attics with Celotex Insulating Cane Board. Because the greatest amount of heat leaks through the roof it is important to line the attic. A Celotex lining in the attic not only effects a remarkable *saving in fuel,* but also *keeps out* excessive sun heat and adds an attractive room. While lining the attic cannot effect the same results as Celotex used throughout the house, it gives protection where it is most needed. The roof is the thinnest and least protected part of the house. Because heat rises, 60% or more of the avoidable heat loss in houses without Celotex, is through the roof. Here are a few very effective methods for insulating roofs and attics.

Relative heat-stopping values



These Sections Are of Equal Insulation Value

. . . . . As a heat-stop, Celotex is 3 times as effective as wood; 8 times plasterboard; 12 times brick; 25 times concrete.

(Data compiled from tests published by the American Society of Refrigerating Engineers)

MATERIAL TO USE

Roof and Attic insulation should be Celotex Standard Building Board, 4′ wide, 7′ to 12′ long and 7/16″ and ⅞″ thick. If only a fire scuttle is available to enter the attic, Celotex Lath should be used. It is 18″ x 48″ and of the same thickness as standard board.

APPLYING CELOTEX

Celotex shall be applied directly to the studs, joists or rafters, running the boards lengthwise with the framing members, leaving a 3/16″ space between all boards. Nail to the intermediate frame members first, with standard galvanized roofing nails 1½″ long, with ⅜″ heads spacing nails 6″ apart, then around all edges spacing nails 3″ apart. If Celotex is to be left natural use 5d finishing nails over all exposed surfaces. Nail Celotex Lath in like manner. See page 437 for interior finish.

Over Roof Rafters. When Celotex is to be covered with rigid roofing, such as wood shingles, slate or tile, it should be nailed directly to the roof rafters and 1″ x 2″ furring strips shall be nailed horizontally over it, driving the nails into the rafters.

When the roof is to be covered with roll or sheet roofing or asphalt shingles, apply wood sheathing either over or under the Celotex. In all cases roofing nails must be long enough to penetrate the wood sheathing.

Under Roof Rafters. When Celotex is applied to the under side of roof rafters, extend it to a tight joint with the insulation on all side walls. In houses already built, where there is no side wall insulation, bring the Celotex to close contact with the side wall sheathing or plate, and carefully close all spaces along eaves where hot or cold air leakage may occur.

If attic rooms are to be plastered, see page 72, Plastering on Celotex Lath.

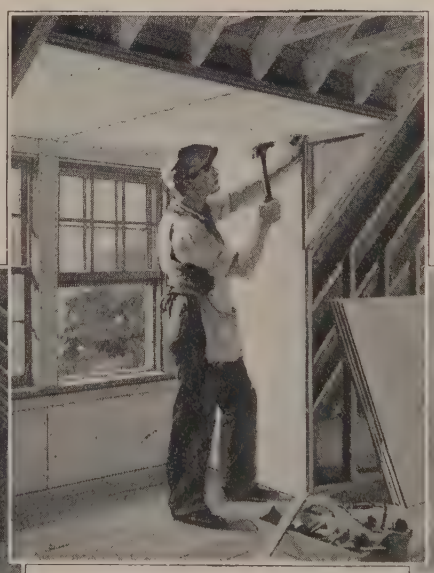
Over Attic Joists. Apply Celotex directly to attic floor joists, extending to a tight joint with side wall. Lay wood floor over Celotex, covering that portion of the attic to be used for storage space or living quarters, nail through to the joists.

Over Attic Floors. If attic is already covered with a floor apply Celotex to the floor in regular manner. Wood flooring, carpet, canvas or linoleum may then be laid over Celotex, if desired.

Over Flat Wood Decks. The roof deck shall be constructed in the usual manner to the required slopes and swept clean of all dirt before laying Celotex. The cant strips shall be installed after the Celotex is in place. Apply the Celotex over wood decks in the regular manner. At all parapet walls and other roof projections the Celotex shall be cut and fitted and shall not be forced into place at any point. Any type of roof covering may be applied to Celotex.

Note: Over wood, metal or concrete decks, for commercial and industrial buildings or roofs of large area, send for Specifications and details for Celotex Roof Insulations Board.

Before lining with Celotex

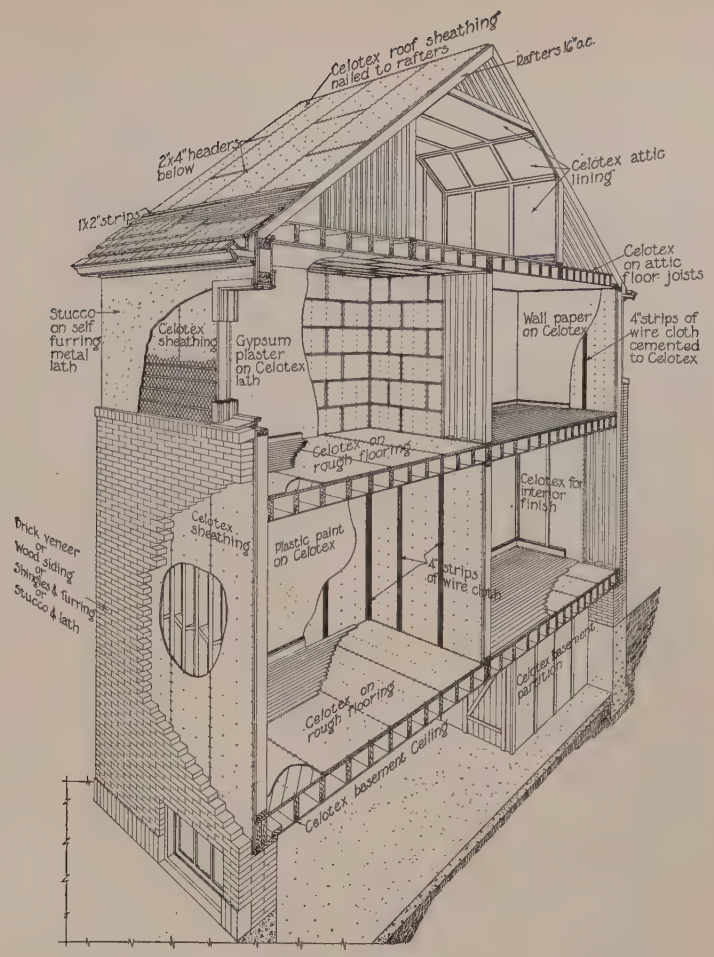


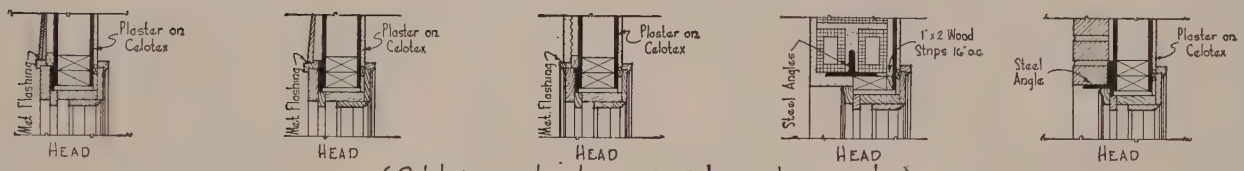
Low cost and easy to apply

An attractive room plus insulation

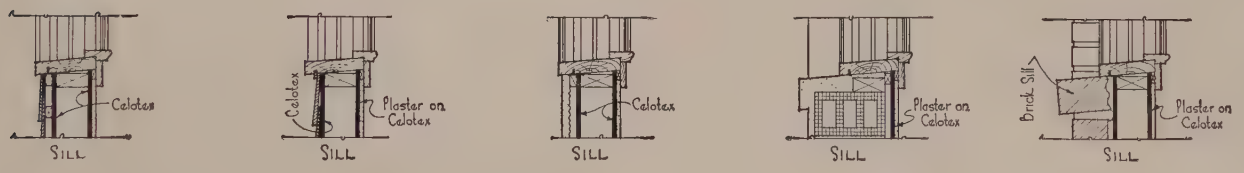
THE CELOTEX COMPANY, 645 N. Michigan Ave., Chicago, Ill.

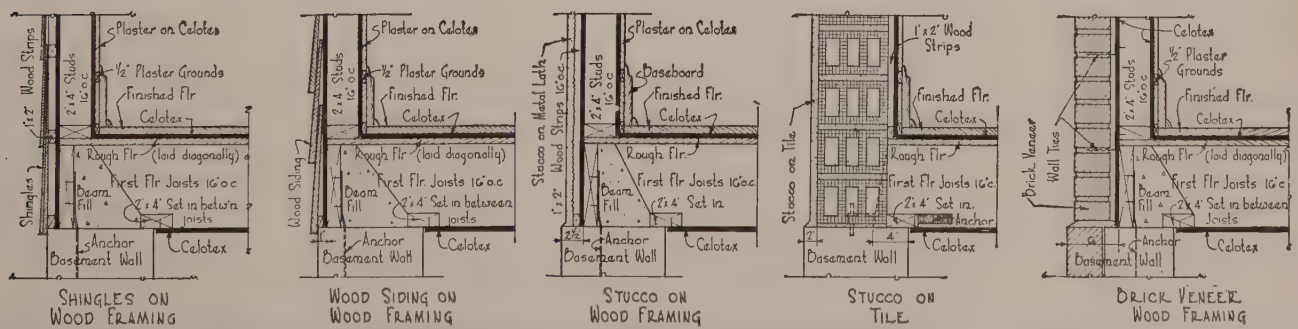
Section
of
Building Showing
Typical Uses of Celotex
and Celotex Lath


Celotex roof sheathing nailed to rafters
Rafters 16" o.c.
2"x4" header below
1x2" strips
Celotex attic lining
Celotex on attic floor joists
Stucco on self furring metal lath
Celotex sheathing
Gypsum plaster on Celotex lath
Wall paper on Celotex
4" strips of wire cloth cemented to Celotex
Celotex on rough flooring
Celotex for interior finish
Brick veneer or wood siding or shingles & furring or stucco & lath
Celotex sheathing
Plastic paint on Celotex
4" strips of wire cloth
Celotex basement partition
Celotex on rough flooring
Celotex basement ceiling



(Celotex construction on side jambs similar)





CELOTEX
INSULATING CANE BOARD

DETAILS SHOWING VARIOUS METHODS OF APPLYING CELOTEX

The word CELOTEX (Reg. U. S. Pat. Off.) is the trademark of and indicates manufacture by The Celotex Company Chicago, Illinois

THE CELOTEX COMPANY, 645 N. Michigan Avenue, Chicago, Illinois

INSULITE—STRUCTURAL INSULATION

Manufactured by THE INSULITE COMPANY

MINNEAPOLIS, MINNESOTA

INSULITE
the Wood-Fiber Insulating Board
TRADE MARK

What Insulite Will Do for You:

With Insulite in the walls and ceiling you can keep comfortably warm in the coldest weather with considerably less fuel—have a pleasurably cool home when it is hottest outside—enjoy freedom from cold, draughty floors—experience the pleasure of living in a home that is more comfortable, quieter, more healthful and more economical to heat.

In spite of the fact that these advantages add considerably to the worth of your home—both from the standpoint of livability and resale value—they cost little if anything to obtain.

A Double Purpose Material:

This is possible because Insulite is not a costly "extra"—it is simply a better structural material to replace something that would otherwise have to be used. Insulite Building Board takes the place of lumber on the outside of the frame. Although the finished job costs no more, the walls are considerably stronger and are far more resistant to the passage of heat and cold. Insulite Plaster Base replaces lath. It grips plaster twice as firmly, besides proving the most efficient heat-proofing. Insulite, when used as a wall board, provides beautiful interior finish, over four times as efficient in insulating against heat and cold as the lath and plaster which it replaces.

What Insulite Is:

Insulite is manufactured from strong, durable wood fiber, made into sheets that are one-half inch thick, possessing great structural strength. It is the pioneer board-form insulation. Seventeen years of constant and widespread use have proved that it is the most practical, durable, and efficient means of securing proper insulation—the guarantee of health, comfort and economy.

Insulite Building Board for Sheathing:

Insulation against heat and cold can be built into the walls of your home in the most practical and economical manner with Insulite Building Board. Due to the fact that it replaces—at no additional expense—the lumber that would otherwise be used on the outside of the frame, Insulite Building Board gives you the advantages of insulation without extra cost!

Laboratory tests of unquestioned authority have established the fact that Insulite Building Board is more than three times as resistant to the passage of heat and cold as lumber. Equally authoritative tests prove that it makes a much stronger wall, able to withstand three times as great wind strain.

No matter what type of frame house you are building, Insulite Building Board is practical to use. Any exterior finish—stucco, brick, veneer, siding, or shingles—may be applied over Insulite Building Board as readily as over lumber.

All Insulite Building Board is supplied in sheets four feet wide, one-half inch thick, and from eight to twelve feet long. It is wrapped six sheets to a bundle.

SPECIFICATIONS

Application:

Apply Insulite vertically, directly to studding set 16" on centers. Crooked studs should be straightened before applying Insulite.

Keep sheets ¼" apart at all edges and ends. Never force into place!

Nailing:

Nail with 1½" galvanized roofing nails spaced 4½" apart. Nail to intermediate studs first. Then nail edges and ends.

Wood Siding:

Apply directly over Insulite Building Board. Nail to studs in usual manner. Make all siding joints butt on studding.

Stucco:

Over Insulite Building Board apply galvanized self-furring wire or metal lath. Nail to studding with 1½" 14-gauge staples. Apply stucco in approved manner.

Caution:

Do not stucco directly on Insulite.

Brick Veneer:

Nail brick ties through Insulite Building Board to studding. Lay up brick in usual manner.

Shingles:

Apply wood strips over Insulite Building Board at right angles to studding to serve as nailing base for shingles. Space strips as many inches apart as shingles are to be exposed to weather.

THE INSULITE COMPANY, Minneapolis, Minnesota

Insulite Plaster Base:

A better plaster job in a better home is guaranteed by Insulite Plaster Base. In addition to its heat-proofing efficiency, which paves the way to all year comfort and every year fuel saving, Insulite Plaster Base possesses the added advantages of giving extra strength to the structure, eliminating lath marks and ugly blotches resulting from condensation, and reducing the number and size of plaster cracks.

Plaster is applied directly to the surface of Insulite Plaster Base. Thus, the cost of the lath ordinarily used is saved. This, together with the economy resulting from the ease of handling the convenient 18″ x 48″ unit, means a lower building cost. The long edges of this unit are shiplapped to make an absolutely tight wall. It is packed ten to a bundle.

SPECIFICATIONS

Application:

Apply Insulite Plaster Base directly to studding, ceiling joists or rafters set 12″ or 16″ on center. Apply sheets to break end joints. Apply with burlap finished side exposed.

Space sheets ¼″ apart at all ends.

Nailing:

Nail, with 4d common or blued nails spaced 5½″ on center—16 nails to a sheet—approximately 6 lbs. of nails per thousand sq. ft.—on long sides of unit nails shall be placed not more than ½″ from shiplapped edge.

It is a good practice to apply a 4-inch strip of metal lath in all corners to reinforce plaster and reduce corner cracks.

Plastering:

Apply hard wall plaster not less than ½″ thick according to plaster manufacturer's specifications. While plaster is drying it is absolutely necessary in cold weather that the rooms and attic be well ventilated. Moisture cannot pass through Insulite and can only be carried off by adequate ventilation.

Note:

When rooms are being plastered it is essential that all openings from plastered sections of the house to the attic be kept closed to prevent moisture from entering attic from which it is difficult to remove moisture unless the attic is well ventilated.

ONE INCH UNIT
(All edges shiplapped)

Application:

Apply Insulite One Inch Plaster Base directly to studdings, ceiling joists or rafters set 12″ or 16″ on centers. Apply sheets to break end joints. Place sheets snugly together but do not force into place.

Nailing:

Nail with 6d common or blued nails spaced 5½″ on center. On long sides of unit nails shall be placed not more than ½″ from edge. Place nails on both sides of end joints. Reinforce corners with a 4-inch strip of metal lath as above. Plaster as above.

NOTICE!

Additional information about Insulite Building Board and Insulite Plaster Base will be gladly furnished on request. If you are erecting a flat roof building, you should know of Insulite roof insulation. Insulite for acoustical correction will interest builders of churches, auditoriums, schools, etc. For information or samples, address The Insulite Co., Builders Exchange, Minneapolis, Minn.

Insulite When Used as a Wall Board

Insulite Building Board when used as a wall board combines the service of the most efficient known structural insulation with an interior finish of a highly desirable character. Replacing lath and plaster it makes the wall or ceiling about five times as resistant to heat and cold—at little, if any greater cost; many times even less.

The beautiful burlap-like surface texture of Insulite offers decorative possibilities limited only by the ingenuity of the decorator. You may plan its use in any room of the house with perfect confidence that the result will be most pleasing. By all means it should be used in the attic. Here it makes waste space usable, besides putting a heat-tight shield over the entire house.

Insulite Building Board is made in sheets one-half inch thick, four feet wide, and from eight to twelve feet long, wrapped six sheets to a bundle.

SPECIFICATIONS

Application When Finish Is to Be Paint or Stain:

Apply, burlap finished side exposed, lengthwise with studding, joists or rafters placed 12″ or 16″ on center.

Keep sheets ¼″ apart at all edges and ends. Never force into place!

Nailing:

First nail to intermediate bearings with 2″ finishing nails, 12″ on center, driven at a slight angle and set slightly below surface of board. Nail edges of sheets with only sufficient 4d box nails to hold sheet in place until panel strips are applied.

Painting and Sizing:

Thoroughly size Insulite with any dependable glue, oil, or water size. Joint fillers are not recommended. After sizing, any type of finishing material may be applied as lacquers, oils, enamels, or plastics.

Paneling:

Apply wood or Insulite strips over joints and elsewhere as needed to create desired effect. (Note: A very satisfactory effect may be obtained by beveling edges of Insulite strips with sandpaper block.)

Application When Plastic Finishes are to be Used:

Apply Insulite Wall Board, burlap finish side exposed, lengthwise with bearings. Place wood headers at ends of sheets.

Keep sheets ¼″ apart at all edges and ends. Never force into place!

Nailing:

Nail with 4d box nails 8″ apart, nailing center bearings first.

Application of Finish:

Apply 2″ strip of fine galvanized wire screen over joints. Apply finish in accordance with manufacturer's specifications.

THE INSULITE COMPANY, Minneapolis, Minnesota

MASONITE CORPORATION

Manufacturers of Masonite Structural Insulation and Presdwood

111 West Washington Street

Chicago, Illinois

Masonite Structural Insulation

Its Manufacture and Adaptability:

Manufactured from wood fibre by a special process of explosion and felting. It has exceptional strength and is manufactured for use as structural sheathing, sound deadener, plaster base, for interior finish in its natural state or with paint or other popular wall finishes applied directly to it.

Write for complete book of specifications and details.

Insulation Value:

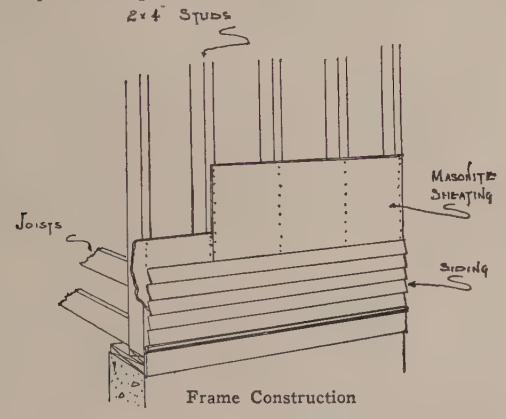
Tests show a heat insulating value of 0.321 per in. thickness per square foot per degree Fahrenheit difference per hour. Masonite comes in boards 4 ft. wide, approximately 7/16 in. thick, and up to 12-ft. lengths. Average weight approximately 72 lbs. per 100 sq. ft. When used as an insulator, sheathing, plaster base, under roofs, or floors, the building is made warmer and quieter, and a decided saving in fuel is effected.

Specifications:

Specification No. 1—Frame Buildings with Wood Siding or Shingle Finish.

Material—Structural insulation for sheathing all exterior walls shall be Masonite Structural Insulation approximately 7/16 in. thick.

Framing—Studs, joists, sills and plates shall be framed as in ordinary frame construction. All studs shall be placed accurately on 16-in. centers. Where horizontal joints are necessary, use 2x4 in. headers cut in between the studs. Any odd spaces required to make over-all lengths shall be located in or near the middle. No extra cross bracing other than commonly used required.



Frame Construction

Application—The Masonite boards shall be applied vertically and directly to the framework, allowing ample bearing surface for nailing on all edges.

Board shall be placed 3/16 in. apart at sides, top and bottom. *Do not force boards into place.*

Around window and door frames, or where tight joints are wanted, bring Masonite to close contact. Nail 3-in. strip of Masonite to back of frames.

Cut Masonite to fit snugly around rafters that project beyond face of studs.

Nailing—Beginning at top, nail Masonite first to intermediate studs, and then entirely around all edges of board to studs, sills, plates or headers. Use standard 1½ in. roofing nail, with ⅜-in. heads, all nails to be 4 in. apart and ⅜-in. from all edges. Drive nails flush with surface of Masonite.

Sidewalls—Wood siding is applied directly over Masonite without the use of building paper, nailing through into studs. Siding boards shall butt on studs.

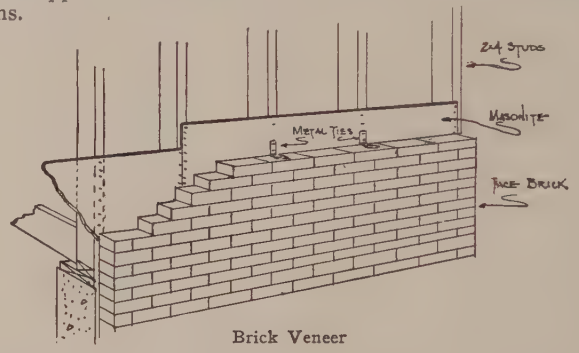
Shingle Walls—If walls are to be shingled, furring strips 1x2 in. shall be applied over Masonite and nailed through into studs. Shingles to be applied in accordance with the manufacturer's specifications.

Specification No. 2—Frame Buildings Having Either Stucco, Stone or Brick Veneer Finish—

Material—Structural insulation for all exterior walls shall be Masonite Structural Insulation approximately 7/16 in. thick.

Framing, Application and Nailing—See Specification No. 1.

Stucco Finish—Stucco mesh shall be applied over Masonite using a furring nail of sufficient length to penetrate well into the stud. Self furring stucco mesh may also be used. Stucco to be applied in accordance with manufacturer's specifications.



Brick Veneer

Stone or Brick Veneer—Galvanized iron wall ties shall be used every sixth course of brick and spaced 16 in. apart. A ½-in. space shall be left between the brick and Masonite.

Specification No. 3—Plaster Base and Insulation for Buildings, Including Partitions and Ceilings—

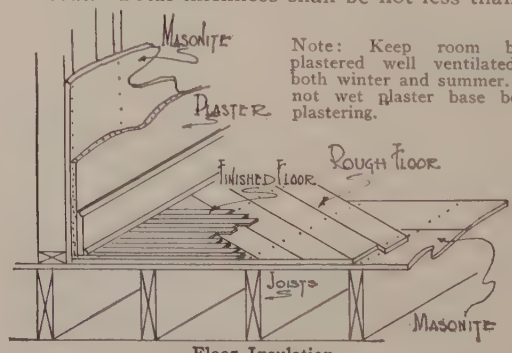
Material—Masonite Insulating Lath, size 4x2 ft., approximately 7/16 in. thick with the 4 ft. edges shiplapped shall be used as insulation and plaster base.

Framing, Application for Framework and Nailing—Framework see Specification No. 1.

Nailing use 5d. box nails, 4-in. on center, first nailing to intermediate studs, then nailing edges.

Application for Masonry Walls—Wood furring strips 1x2 in. shall be securely anchored to masonry walls and ceilings, in approved manner, on 16-in. centers.

Plaster—Quick setting gypsum plaster shall be used. Plaster should set in about 1½ hours, and not exceeding 2 hours. Use an accelerator if plaster fails to set in 2 hours. Apply the plaster directly to the Masonite. The first coat, or scratch and brown coat together must have a thickness of not less than ⅜ in. and must be thoroughly dry before applying finish coat. Total thickness shall be not less than ⅜ in.



Note: Keep room being plastered well ventilated in both winter and summer. Do not wet plaster base before plastering.

Floor Insulation

MASONITE CORPORATION, 111 West Washington Street, Chicago, Ill.

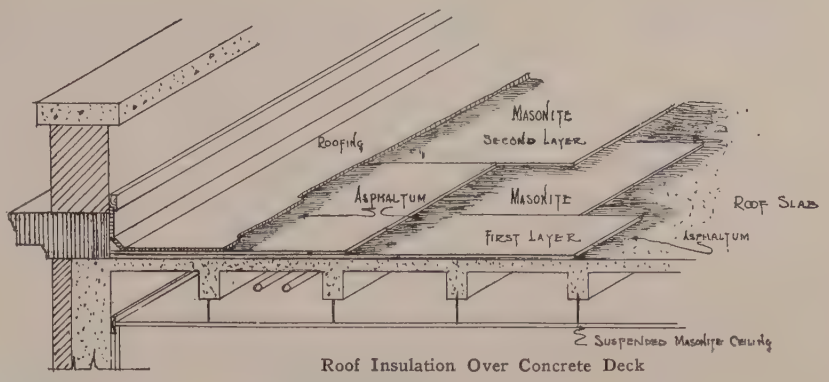
Specification No. 4—Interior Finish—

Material—Structural insulation for all walls shall be Masonite Structural Insulation approximately 7/16 in. thick.

Framing Application and Nailing—See Specification No. 1 for framing. Nailing should be 4d. finishing nails, driven at approximately a 30° angle, on intermediate studs. Either a 1½ in. roofing nail or a 5d. box nail on ends and sides. Use 6d. finishing nails for Masonite batten strips.

Trim—Joints to be covered with wood battens 1x3 in. or suitable width, not less than 2 in. wide. Masonite battens may be used to secure more artistic finish. Baseboard and other trim to be as commonly used.

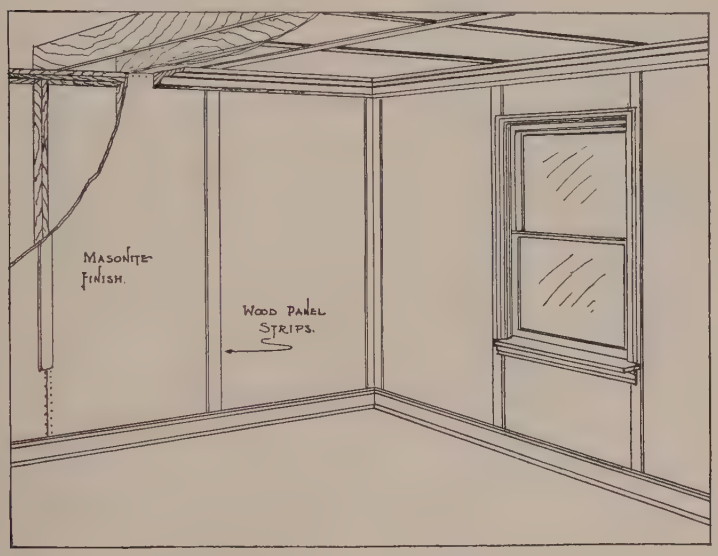
Painting and Decorating—Masonite may be left in its natural pleasing finish, or it may be stained without sizing, or painted over size or priming.



Roof Insulation Over Concrete Deck

Specification No. 5—Roof Insulation Applied on the Underside of Wood Rafters—

Note: This form of application is suitable for insulating roofs, and for new shingle roofs of wood, slate, zinc, copper and other types of roof covering materials, which require a solid wood deck for nailing.



Masonite Used as an Interior Finish

Material—Roof insulation shall be Masonite Structural Insulation approximately 7/16 in. thick as manufactured by the Masonite Corporation, Chicago, Ill.

Framing—The rafters shall be spaced 16 in. on centers. Whenever it is necessary to have a horizontal joint in the Masonite, a 2x4 in. header shall be cut in between the rafters. Rafters may be spaced 24 in. on centers when considered desirable, but when so spaced, 2x4-in. headers shall be cut in between all rafters, on not to exceed 36-in. centers.

Application—The Masonite boards shall be applied lengthwise of and directly to the rafters, and set in place so as to have a bearing for nailing along all edges.

Leave 3/16-in. space between adjoining boards, also at top and bottom of boards. Around openings and at corners, or where a snug joint is desired, the Masonite shall be fitted carefully and brought to moderate contact. Do not force into place.

Specification No. 6—Roof Insulation Over Concrete and Wood Decks—

Material—Roof insulation shall be Masonite Roof Insulation size 3x4 ft. or 4x4 ft. as manufactured by the Masonite Corporation, Chicago, Ill.

Concrete Deck—Preparation—The roof deck shall be reasonably smooth, dry, well cured and free from all rubbish before applying Masonite. If not well cured, the concrete deck shall be primed, using not less than one gallon of standard concrete primer per 100 sq. ft.

Application—Mop concrete deck solid with a heavy uniform coat of hot roofing pitch or asphalt, using not less than 30 lbs. per 100 sq. ft. Masonite shall be laid in asphalt or low melting point pitch and pressed firmly into place while the asphalt or pitch is hot. All edges of Masonite shall be brought to moderate contact. Do not force boards into place. Transverse joints and joints of the successive layers shall be broken.

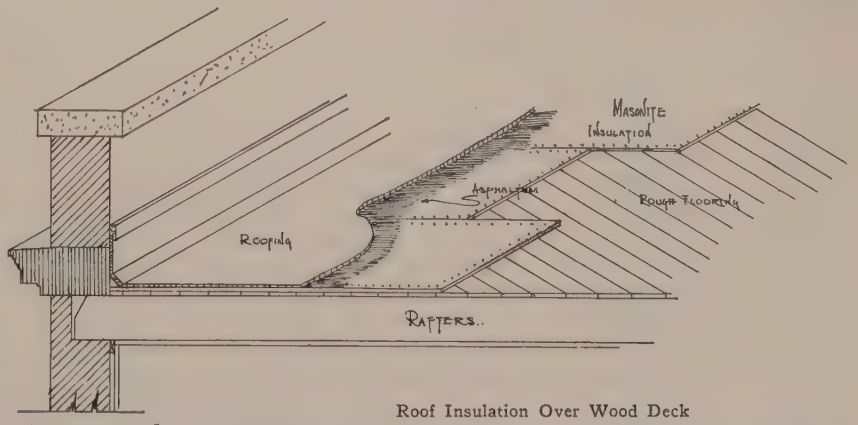
If more than one layer of Masonite is to be applied, mop the top surface of the previous layer in the same manner as stated above, but without primer.

Wood Deck—Preparation—Roof deck shall be made of seasoned, dressed and matched lumber, properly nailed, all nails driven flush with boards. The deck shall be laid to slope and pitched to drain, as shown in plans and specification. Deck shall be swept clean before laying Masonite Insulation. Nail cant strips around walls and where required.

Application—The first layer of Masonite shall be nailed to wood deck, using 1½-in. standard roofing nails, with ⅜-in. head, and spaced 12 in. on centers, nailed flush with surface. Nails in body of board to be staggered.

If more than one layer is required, mop the surface with roofing pitch, or asphalt using not less than 30 lbs. per 100 sq. ft. Press Masonite firmly into the hot asphalt, or roofing pitch, breaking all joints.

Steel Deck—Preparation—All steel decks must be free from grease, dirt, oil, etc., and the weather surface properly coated with suitable asphalt primer. All rubbish must be removed, and the surface swept clean. All sharp angles to be rounded out so as to avoid rough, sharp edges. Lay a strip of roofing felt 6 in. wide, uncemented, over expansion joints at ridge, cementing the Masonite over same.



Roof Insulation Over Wood Deck

Application—The application is identically the same as in the case of concrete and gypsum decks. Apply the roofing in the usual manner over the Masonite, according to the roofing manufacturer's specifications.

MASONITE CORPORATION, 111 West Washington Street, Chicago, Ill.

UNITED STATES MINERAL WOOL

The Perfect Insulator and Sound Deadener

FIRE-PROOF SOUND-PROOF HEAT-PROOF COLD-PROOF VERMIN-PROOF

Manufactured by UNITED STATES MINERAL WOOL COMPANY

280 Madison Ave., NEW YORK Factory STANHOPE, N. J.

Western Connection—Columbia Mineral Wool Company, South Milwaukee, Wisconsin

Product:

Mineral Wool—A non-combustible, indestructible Insulator and Sound Deadener.

Character:

A mineral substance, made by converting melted scoria into a fibrous state. It holds 92% to 96% of air in suspension, which is more than any other fire-proof substance.

Mineral Wool—in walls for insulation—in floors for sound deadening.

Uses:

For interlining roofs, walls, ceilings and floors it is unequaled as an insulator and sound deadener, is easily applied and low in cost. Buildings lined with Mineral Wool are warmer in Winter, cooler in Summer and thoroughly sound-proof.

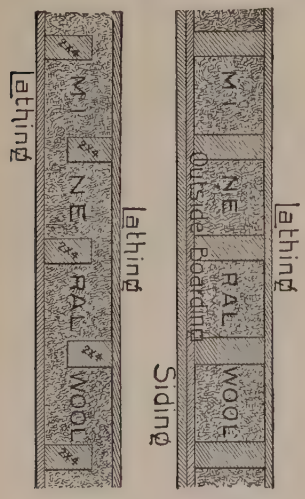
How to Install:

In the ordinary building, fill space between studding from sill to plate with Mineral Wool and carry this filling up between the rafters from plate to ridge of roof, thus providing an unbroken shield of insulation. Fill walls when lathing. Lath one side completely, then begin lathing the other side from the floor up. At a height of two or three feet, fill in Mineral Wool, apply a few feet more of lath, fill in again and continue process to the top. Pack in compactly as the pressure of Mineral Wool behind the lath will not interfere with the keying of the plaster.

How to Estimate:

To find the quantity of Mineral Wool required to fill the outside walls the full thickness of studding:

Rule—1 lb. per sq. ft. for each inch in thickness. Take the entire distance around the building on a horizontal line and multiply by the height of the studding, which will give the square feet of outside surface. Deduct, ordinarily, one-third to one-half for space occupied by doors, windows, chimneys, studding, bracing, etc. Multiply the remainder by the thickness of the studding; the result will be the number of pounds of Mineral Wool required to fill the space.



Mineral Wool a Real Economy:

To insulate the average home will cost approximately $300. The saving in winter fuel alone will repay this initial cost within a short period as Mineral Wool keeps the heat inside where it should be. It likewise repels the outside heat in Summer and all rooms, even directly under the roof, can be occupied in comfort. The use of Mineral Wool reduces upkeep, assures greatest economy and comfort and better resale value.

Drawings at left show Mineral Wool packed studding in walls, the drawing nearest the margin being of the staggered studding type of construction.

The drawing at the right shows Mineral Wool in outside walls and between rafters, also placed above and between beams for deadening floors.

UNITED STATES MINERAL WOOL CO., 280 Madison Ave., New York

CELOTEX
BRAND
INSULATING CANE BOARD

LATH

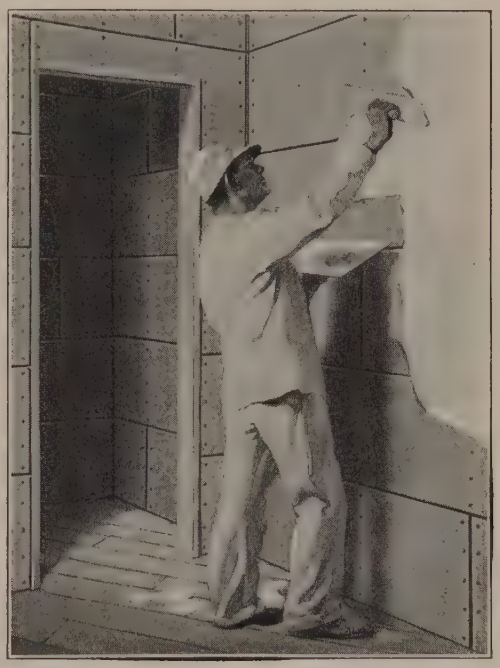
A SUPERIOR PLASTER BASE

CELOTEX Lath presents an ideal surface for plastering. It is the only lath made from the long, tough fibres of cane. These fibres protrude from the surface and become imbedded in the plaster forming a secure and permanent bond. Celotex Lath is especially designed to reinforce against plaster cracks and eliminate lath marks, thereby permanently protecting the beauty of plastered walls and ceilings. Then, too, it gives insulation, the indispensable requirement for all year comfort in the modern home.

DESCRIPTION

Celotex Lath is 18″ x 48″, 7/16″ and 7/8″ thick. Tied in bundles of 15 lath to the bundle, 90 sq. ft., or 10 sq. yards, weighing approximately 70 pounds to the bundle.

The beveled edges provide reinforcement against plaster cracks at all joints—the ship-lap joints eliminate open spaces the common cause of lath marks. These tight joints also keep the wet plaster away from the wood framing members. Celotex Lath provides an ideal surface for the proper drying out and curing of the plaster.



Where cutting is necessary, the lath shall be scored with the lather's hatchet and broken along line of scoring. Where piecing out is to be done use strips of Celotex. Do not use wood.

All interior angles shall be reinforced with metal or wire lath, also where joints of frame and masonry occur. All exterior angles shall be reinforced with standard metal corner bead.

PLASTERING ON CELOTEX LATH

Do not moisten Celotex Lath before or after nailing in place.

Prepared Gypsum plaster containing not more than 10% of lime shall be used for both scratch and brown coat.

The scratch and brown coat together shall not have a thickness of less than 3/8″. The total thickness of plaster including the finish coat shall not be less than 1/2″.

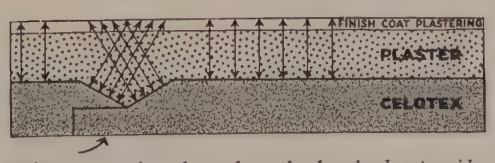
Darby strokes must be in the direction of the studs and joists with the darby or rod spanning two or more studs or joists.

APPLICATION OF CELOTEX LATH

Framing. Studs, joists and rafters shall be framed as in ordinary frame construction, spaced 16″ o.c.

Application. The lath shall be applied running long edges at right angles to the framing with beveled edges exposed to receive the plaster. Securely nail in place with special blued plasterboard nails 1 1/8″ long with 5/16″ heads, using 5 nails per stud or joists 20 nails per lath. Stagger or break joints with the preceding lath course.

BEVELED EDGES
Reinforce the Plaster at All Joints



This cross-section shows how the bevel edge provides for additional plaster at the joint. A reinforcement against cracking.

NOTE: *Send for complete information and Specifications. Ask for Specification Book No. 23.*

THE CELOTEX COMPANY, 645 N. Michigan Ave., Chicago, Ill.

MILCOR Metal Lath, Metal Roofing, Etc.

Made by MILWAUKEE CORRUGATING COMPANY

Milwaukee, Wis. Chicago, Ill. La Crosse, Wis. Kansas City, Mo.

EASTERN PLANT: THE ELLER MANUFACTURING CO., CANTON, OHIO

Used in all types of buildings, from homes to skyscrapers; specified by leading architects.

MILCOR
TRADE MARK REG. U. S. PAT OFF.

Stocked by Sheet Metal Dealers, Building Supply Dealers, Hardware Dealers, Jobbers and Distributors.

Home Building Products

Milcor Stay-Rib Metal Lath; Netmesh Metal Lath; "Expansion" Corner Bead; "Expansion" Casings, Base Screed, and Flashing; Concealed Metal Picture Molding; Metal Window Stools, Cove Bases, Chair Rails, Curved Point Base Screed, Bull Nose Corner Bead, etc.; Spanish and American Metal Tile Roofing; Metal Shingles; Metal Ceilings and Walls; Eaves Trough, Conductor Pipe and Fittings; Corrugated and Sheet Roofing; Ventilators and Skylights; Architectural Ornaments; Furnace Pipe and Fittings; Stove Pipe, Elbows, etc.; Hot and Cold Air Registers and Faces, etc.; and other sheet metal building products.

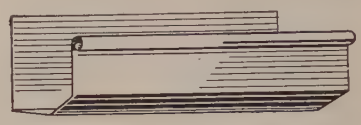
For Metal Tile Roofing see Page 69.

Rain Carrying Equipment—Conductor Pipe, Eaves Trough, Gutters, Etc.

All Milcor Products are made in the famous rust resisting

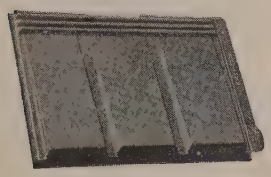
ARMCO

Ornamental and plain rain conductor pipe, trough, gutters and fittings, for all types of architecture. Write for advice on this important detail.



Ingot Iron as well as in Steel, "Coppered Metal", pure zinc or Anaconda copper. Stone pipe and elbows also made in the new "Wilder Metal" (aluminized).

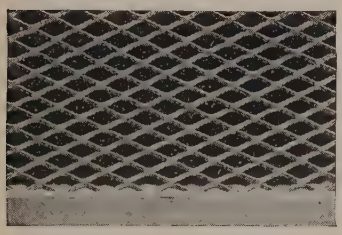
Safe Roofs Are Metal



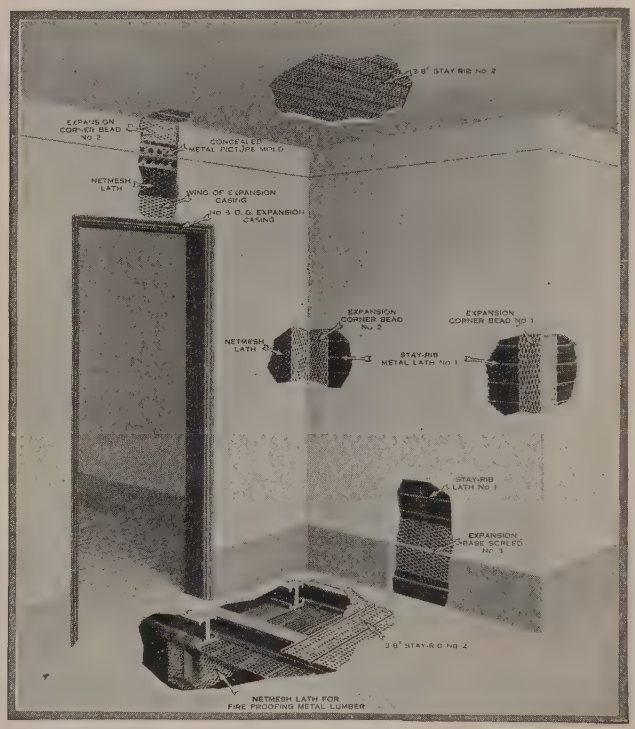
Milcor Spanish Metal Tile is shown on Page 69. Another popular style is the American Metal Tile shown above. It is the safest roof known. All the advantages listed on Page 69 apply also to this style. Write for exact quotations.

Netmesh Metal Lath

Milcor Netmesh Metal Lath insures crackfree plastering and fire safety even when wood-stud construction is used. It offers, at low cost for homes, the same degree of permanence attained in big-building construction.



It Pays to Build this Way:


3/8" STAY RIB NO 2
EXPANSION CORNER BEAD NO 2
CONCEALED METAL PICTURE MOLD
NETMESH LATH
WING OF EXPANSION CASING
NO 9 O.G. EXPANSION CASING
EXPANSION CORNER BEAD NO 2
EXPANSION CORNER BEAD NO 1
NETMESH LATH 2
STAY-RIB METAL LATH NO 1
STAY-RIB LATH NO 1
EXPANSION BASE SCR'D NO 1
3/8" STAY-RIB NO 2
NETMESH LATH FOR FIRE PROOFING METAL LUMBER

Concealed Picture Molding

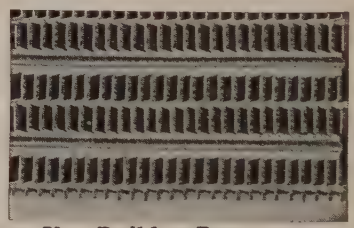
This modern Milcor Product has won favor with the best architects and contractors. Embedded in plaster; strong, neat, sanitary. Investigate before you build.

Insist on Firesafe Construction

Milcor construction insures firesafe, crackfree, permanent walls and ceilings at reasonable cost. Maintenance costs are reduced and the resale value of your home remains higher if you build this way. It pays!

Stay-Rib Metal Lath, No. 1

A great plaster saver. Made in three styles, No. 1 for walls; No. 2 for ceilings; No. 3 for reinforced concrete construction, terrazzo floors, etc. Find out about Stay-Rib and "solid partitions".

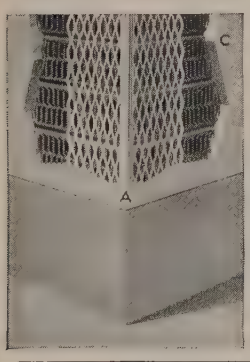


"Expansion" Corner Bead

Pat'd June 13, 1922. Used in thousands of homes and in the world's finest big buildings. Insures precisely straight, neat corners and gives unequalled protection to plaster. Corners withstand unusual abuse when thus protected.

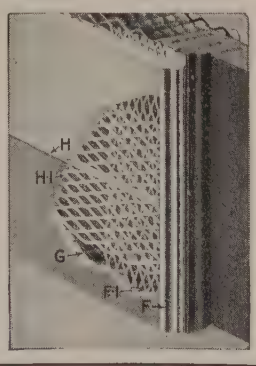
"Expansion" Casings

Pat'd June 13, 1922, and Jan. 6, 1926. Eliminates costly wooden trim around doors and windows. Reduces labor costs. Is sanitary, prevents cracks around doors and windows and greatly improves appearance. Firesafe and economical.



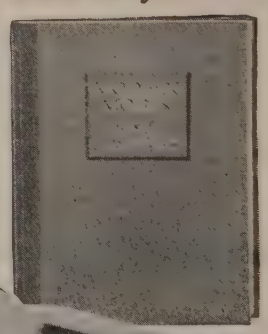
LEFT: "A"–Milcor "Expansion" Corner Bead No. 1 (wings embedded in plaster). "C" — Milcor "Stay-Rib" Metal Lath No. 1.

RIGHT: "F" and "F-1" — Milcor "Expansion" Casing. "G" — Netmesh Metal Lath. "H" and "H-1"— "Expansion" Base Screed (Wing embedded in plaster).

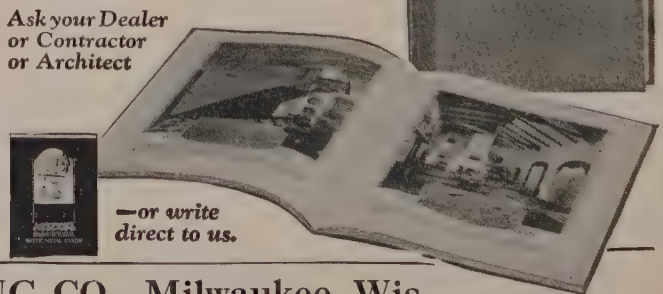


Get These Books Before You Build or Buy

These Milcor books contain valuable advice and charming ideas for the home builder. "Modern Modes in Better Plastering" explains metal lath construction and contains authentic information on period-textures and color-tones in plastering. "Safe Roofs" is another valuable Milcor Booklet, describing Spanish Metal Tile Roofing, American Tile, Metal Shingles, etc. Both books will be sent on request, without cost or obligation to you.



Ask your Dealer or Contractor or Architect



—or write direct to us.

MILWAUKEE CORRUGATING CO., Milwaukee, Wis.

METAL LATH FOR EVERY BUILDING NEED

Manufactured by

NORTH WESTERN EXPANDED METAL COMPANY

General Office—407 S. Dearborn Street, Chicago

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PITTSBURGH, Penn.—33 Pride Street
ST. LOUIS, Mo.—401 Louderman Bldg.

Products

A complete line of Flat Metal Lath, Rib Lath, also Pure Iron, Copper-bearing, and Galvanized Lath, Stucco Base, Concrete Reinforcing, Plastering Accessories, etc.

Brand Names

Kno-Burn, Jr., Plasta-Saver, Norwest, Steelhart, Econo, Nemco Plastering Accessories.

Literature. Samples.

Also Catalogs and Specifications—Sent free on request.

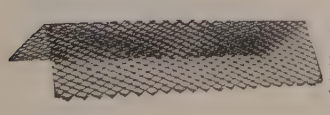
Reasons for using North Western Metal Lath

To retard fire, prevent plastering cracks and lath streaks, reinforce walls and ceilings. Also for rat-proofing, to strengthen the structure, prolong its durability, enhance its appearance, decrease "up-keep" and decorating cost.

"Danger Points" Which Should Be Guarded

Safeguard your investment and personal safety by using Metal Lath at these vulnerable points where plastering troubles are most frequent, and the fire hazard greatest.

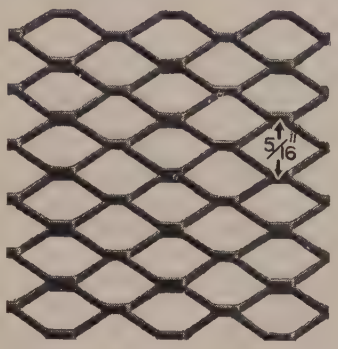
Corna Lath



Used to prevent corner cracks in wood lath construction. 3" metal lath angles. 8 ft. lengths. 25 pieces to bdl. Necessary for a good plastering job.

Strip Lath

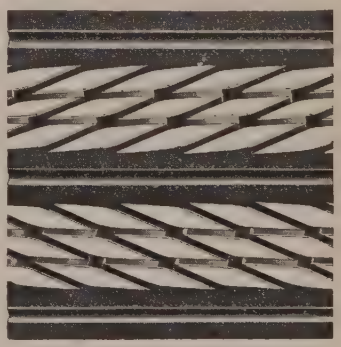
To prevent cracks in the joints of plaster board construction. 4" and 6" widths, 8 ft. lengths. Approximately 400 ft. to crate.



KNO-BURN, JR. Metal Lath

The much talked-of SMALL MESH diamond lath which has amazed the building world by its remarkable reinforcing qualities and *economy in the use of plaster.* A stiff, easily erected and perfect bonding plastering base. "Diamonds" measure but 5/16" x 5/8"—smaller by more than 1/6 than those of the smallest diamond mesh lath heretofore obtainable. KNO-BURN, JR. has 3,000 more locking "keys" to the sheet, and fully one-third more steel reinforcing strands. Small mesh can be thoroughly embedded in scratch coat. "Key" while ample is uniformly small, preventing waste from droppings or excessively large clinches which so often shear off. With KNO-BURN, JR. builders cut their plastering costs from 5c to 9c per yd. yet turn out the highest quality work. Used for all types of plain or ornamental plastering, rat-proofing and fire-proofing. Sheets 24" x 96". Pkd. 9 to bdl. Painted. Wgts. Sq.yd. (respectively) 2.2, 2.5, 3.0 and 3.4 lbs. Furnished also cut from "Keystone" Copper-Bearing Steel.

Plasta-Saver



⅛" Flat Rib Lath. A truly wonderful plastering base for construction in which combustible materials—wood lath or plaster board—would ordinarily be used. Fire-resistive, crack retarding. Sheets 24" x 96". 9 to bdl. Wgts. Sq.yd. 3.4 lbs. Painted. Furnished also cut from "Keystone" Copper-bearing Steel.

Steelhart Stucco Base

A large meshed *Expanded Metal,* considered by the majority of authorities to be the most satisfactory type of reinforcing for exterior stucco, whether "Gunited" or hand applied. Mesh 1½" x 3". Sheets 48" x 96" and 51" x 96". Pkd. 9 to bdl. Wgts. Sq. yd. (respectively) 1.8 lbs. and 3.6 lbs.

NORTH WESTERN EXPANDED METAL CO., 407 So. Dearborn St., Chicago

For Plaster STEELTEX For Stucco

1 STEELTEX
Reinforces plaster
Steel is built right into the plaster to reinforce against cracks just as concrete is reinforced. The whole home is strengthened by steel wrapped around each room.

2 STEELTEX
Insulates
The heavy STEELTEX backing gives insulation with economy—because it's part of a STEELTEX plaster job, without extra material or labor. Comfort—winter and summer—less fuel.

3 STEELTEX
Damp-proofs
And you shut out dangerous dampness with the waterproof STEELTEX backing and special mastic compound. Your walls and ceilings are tight-sealed—every room dry and healthful!

4 STEELTEX
Deadens sound
Today, thanks to the double backing, you build quiet, restful rooms when the plaster goes on the walls over STEELTEX! Inside noises greatly minimized—street noises kept out.

STEELTEX for Interior Plaster

Steeltex is a modern reinforcing base for Plaster and Stucco, which combines the four results shown above with one material, one application and with one labor cost.

The material consists of a 2″ x 2″ fabric or mesh of cold drawn, galvanized, welded steel wires of 70,000 pounds tensile strength per square inch of steel.

Securely fastened to this fabric is a tough, two ply, waterproof backing, which in addition to providing insulation, damp-proofing and sound deadening, insures automatic backplastering.

Steeltex is manufactured in three styles, namely: Steeltex for Interior Plaster, Steeltex for Stucco and Overcoating and Steeltex for Roofs and Floors (concrete or gypsum).

Steeltex for Stucco and Overcoating is composed of heavier fabric and backing due to the more severe service to which the material is subjected in use and to the fact that the Stucco slab is necessarily heavier in weight being of greater thickness than the interior plaster slab.

Steeltex, both for interior plaster and for stucco and overcoating provides a sound material upon which to apply both plaster and stucco, in both new construction and for remodeling.

The material is easily handled and applied. It is easy to plaster over and it gives a better finished job than can be obtained with any other material.

Section Showing STEELTEX and How It Is Used

① Waterproof backing
② Waterproof compound
③ Second tough backing
④ Furring device
⑤ Rust-proofed steel reinforcing fabric
A Scratch coat of plaster
B Straightening coat
C Finishing coat

STEELTEX for Stucco and Overcoating

While Steeltex is not a cure-all for faulty foundations, superstructure and workmanship, it has a tendency to minimize plaster trouble from other sources through its great strength and durability, by actually building steel right into the plaster wall just as concrete roads are reinforced.

Steeltex for Interior Plaster is furnished in sheets 50″ x 52″ (2 sq. yds.) 40 sheets to the bundle.

Steeltex for Stucco and Overcoating is furnished in sheets 50″ x 52″ (2 sq. yds.) 40 sheets to the bundle and in rolls 50″ wide by 216′ long (100 sq. yds. to the roll).

Detailed information on Steeltex for Interior Plaster, Steeltex for Stucco and Overcoating and Steeltex for Floors and Roofs may be obtained by communicating with the nearest District Sales Office listed at the bottom of this page, or the home office at Pittsburgh, Pa.

NATIONAL STEEL FABRIC COMPANY

UNION TRUST BLDG. — DIVISION OF Pittsburgh Steel Co. — **PITTSBURGH, PA.**

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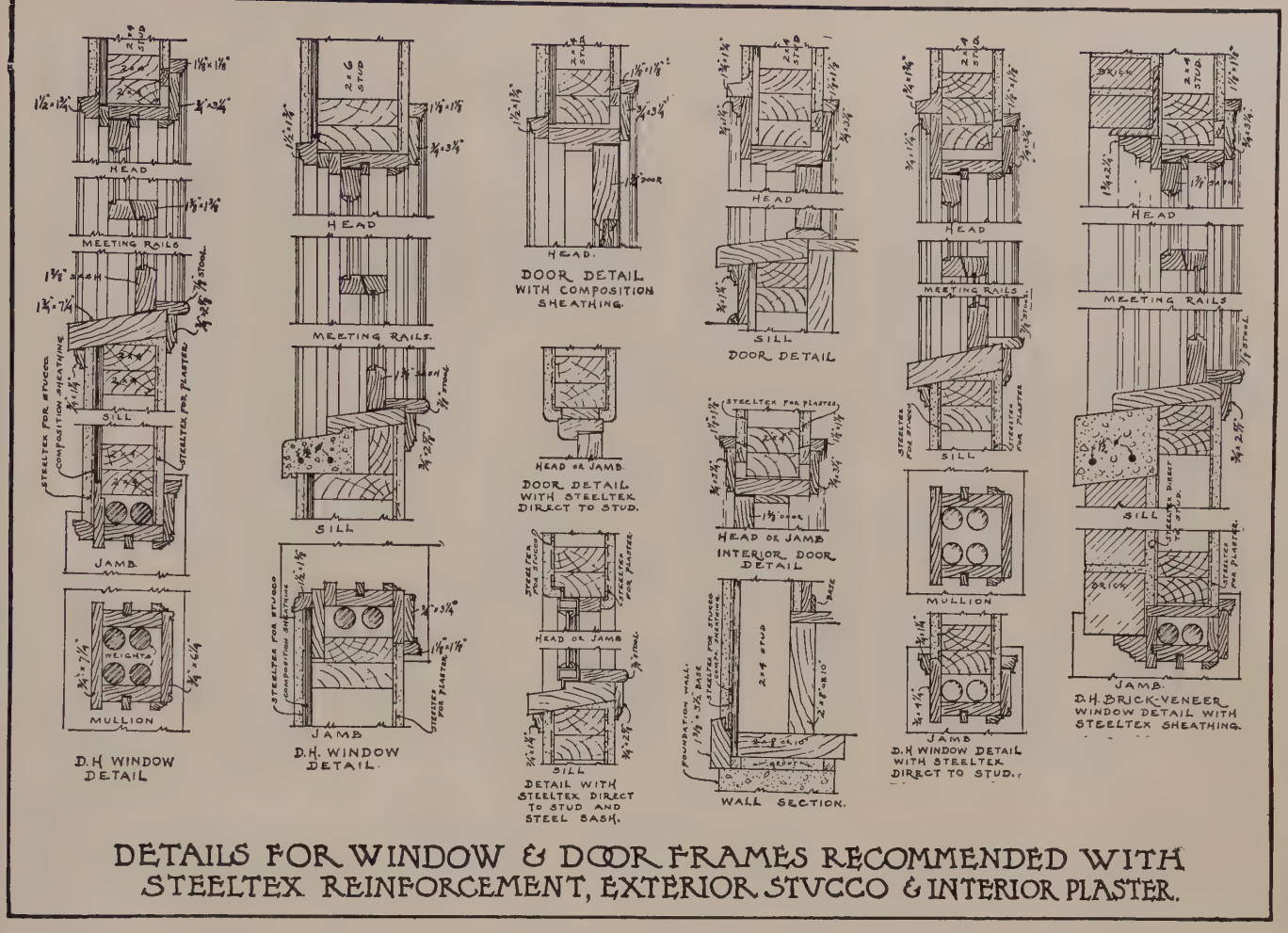
NATIONAL STEEL FABRIC CO., Union Trust Bldg., Pittsburgh, Pa.

DETAILS OF STEELTEX CONSTRUCTION



DETAILS FOR WINDOW & DOOR FRAMES RECOMMENDED WITH STEELTEX REINFORCEMENT, EXTERIOR STUCCO & INTERIOR PLASTER.

NATIONAL REINFORCING

National Reinforcing is a name which applies to various standard types of electrically welded steel fabric manufactured by the National Steel Fabric Company, which are used for reinforcing cement sidewalks, driveways, cellar and garage floors, for corners and joints where wood lath, insulating lumber and plaster board construction are employed.

There is a type of National Reinforcing for practically every reinforcing purpose. The types shown below are merely examples of a few of the uses for which this material is adapted.

Send for complete details on the various styles of Steeltex and National Reinforcing. Address the home office of the National Steel Fabric Company, Union Trust Bldg., Pittsburgh, Pa., or any of the District Offices listed at the bottom of the opposite page.

National Reinforcing
for Sidewalks and Driveways

National Reinforcing
for Corners and Joists

NATIONAL STEEL FABRIC CO., Union Trust Bldg., Pittsburgh, Pa.

WHEELING ARCH LATH

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Philadelphia
Columbus, O.
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Kansas City

Chicago
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Made of

COP-R-LOY

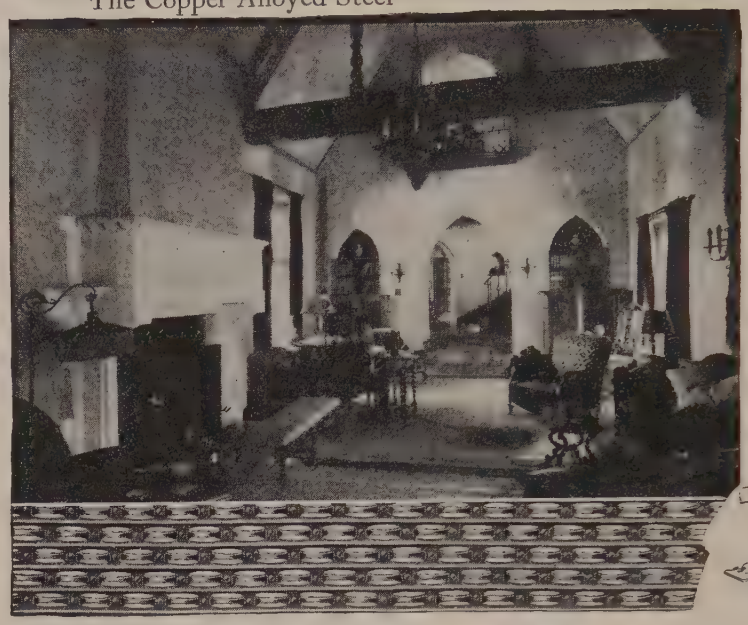
The Copper Alloyed Steel

Products

Wheeling Arch Lath, Expanded Metal Lath, Zinc Coated Conductor Pipe, Spanish Metal Tile and Fixtures, Roofing Ternes, Steel Ceilings, Metal Shingles, Metal Corner Beads, Base Screed, Picture Mould, Coal Doors, Ash Pit and Clean-Out Doors.

The Better Plaster Base

Arch Lath is a distinctive metal lath both from the standpoint of design and service. It has gained wide popularity because of favorable low cost in finished wall and ceiling. The saving in time, labor and plaster made possible through the use of Arch Lath *now* brings fire-safe wall and ceiling construction within reach of every purse.



Residence, St. Louis County
Architect: Marcell Boulicault

The utmost in permanent, fire-safe wall and ceiling construction! Arch Lath is now supplied in COP-R-LOY, the Copper Alloyed Steel. For greatest economy, specify Arch Lath made of this finer and more lasting steel.

Maximum Protection Against Fire

Arch Lath is fabricated from solid sheets of steel. All the metal is used. It comes nearer to being a solid sheet of fire-proof steel than any other lath on the market, insuring adequate protection for those in the home.

Produces a Perfect Key

Due to its distinctive arch design, Arch Lath grips the plaster from many angles. One sheet, 27 x 96 inches, grips the plaster at 8064 points. The rigidity of the lath and the ample keying of the plaster aids directly in saving both time and labor as the plasterer doubles back over the first coat without delay. The first coat becomes firm and dry almost immediately. By applying the second coat over the first coat without any delay, the time and labor required for removing and re-erecting scaffolding *is saved.*

A Real Plaster Saver

The openings or perforations in Arch Lath are so designed as to permit only the correct amount of plaster to squeeze through for perfect key. This eliminates piling up of plaster between walls. To secure rigidity of construction without plaster or material waste is to get the most from lath, and is exactly what Arch Lath enables you to do. Arch Lath is a plaster saver—not a plaster skimper. There is a real difference!

Remarkable Rigidity

The rigidity of the sheets of Arch Lath makes for quick, low-cost application. Supplied in sheets that are 27 inches wide instead of the customary 24 inches. This enables the lather to cover 12½% more surface with the same effort—effects a substantial saving in time. The usual excessive overlap of laths increases material costs without providing additional strength. The true, stiff edges of Arch Lath, together with the rigidity of sheet, make excessive overlap unnecessary.

True Lath Economy

Arch Lath occupies a unique position in the metal lath field. Heretofore, only inflammable types of lath have been considered practical for small homes because of low first cost. However, the real cost of any lath is determined by the finished plastering costs. In such costs are found the reason for Arch Lath popularity in small home building. Arch Lath is a time, labor, plaster and material saver. It provides permanent fire-safe walls.

Specifications

Size of sheets, 27 x 96 inches. Packed 10 sheets per bundle, 20 square yards. Weight painted, 4.5 lbs. per square yard. Weight galvanized, 5.2 lbs. per square yard. Black painted and pure zinc coated finishes.

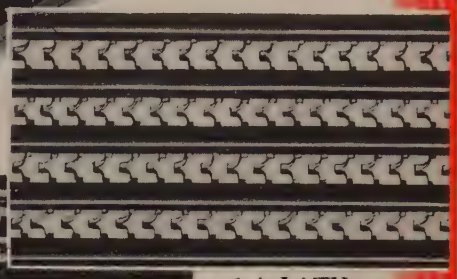
Wheeling
CORRUGATING COMPANY

Reg. U. S. Pat. Office

WHEELING CORRUGATING COMPANY, Wheeling, W. Va.

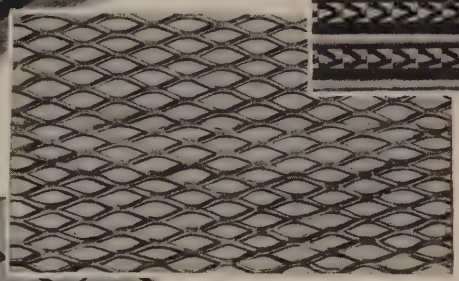
TRUSCON STEEL BUILDING PRODUCTS

METAL LATH FOR BETTER PLASTERING



1-A LATH

2-A LATH



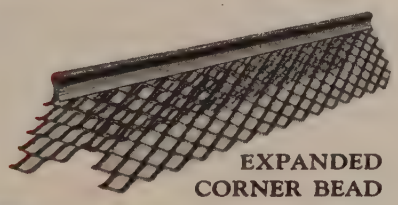
DIAMOND LATH

CATALOG
ON REQUEST

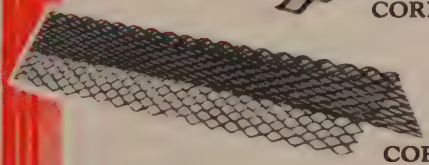
STUCCO-STEEL

TRUSCON

takes the lead in the Residential field

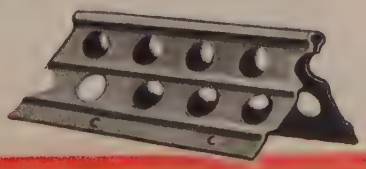


EXPANDED
CORNER BEAD



CORNERITE

RIB STEEL
CORNER BEAD



WIDE FLANGE
CORNER BEAD

TRUSCON has made fireproof construction entirely practical for the moderate priced home. Fireproof construction is modern, permanent construction and homes built with Truscon materials combine economical first cost with lowest maintenance costs and highest resale values. Truscon Steel Company is the only manufacturer offering a complete line for fireproof residential construction.

TRUSCON STEEL COMPANY

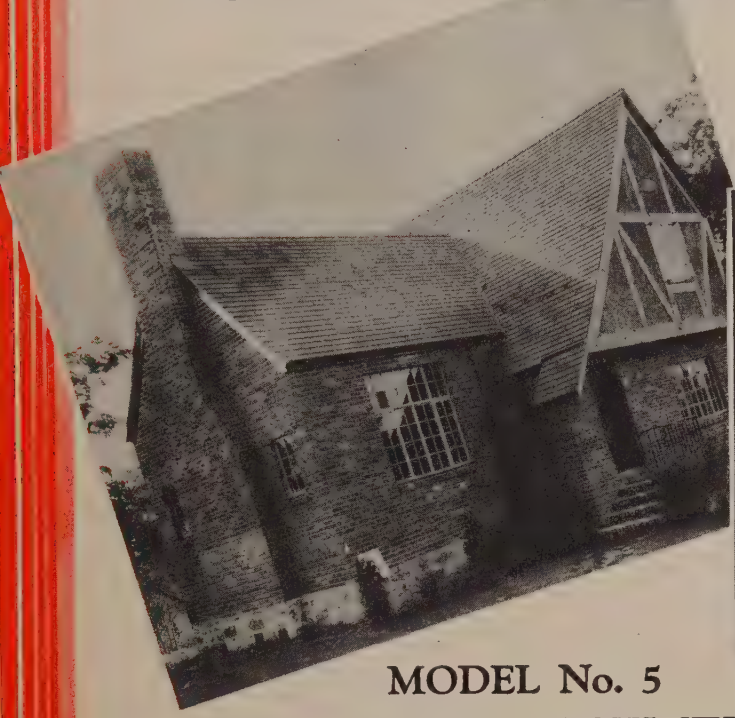
YOUNGSTOWN, OHIO

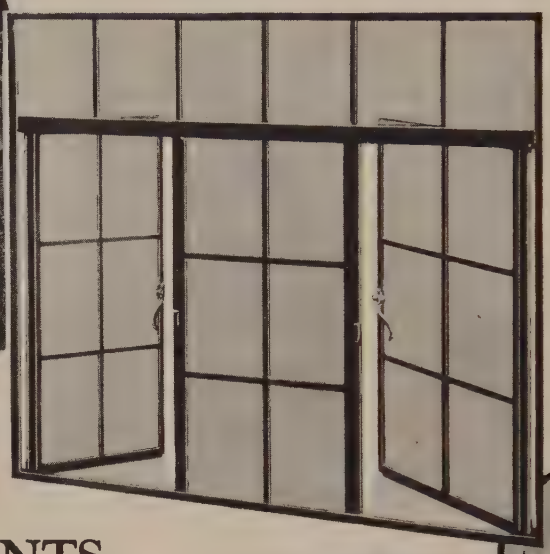
World's Largest Manufacturers of Steel Building Products

Turn to Next Page

TRUSCON
STEEL CASEMENTS

for Every Room in the Home





MODEL No. 5
TRUSCON CASEMENTS
are made in Single and
Combination Units

WINDOWS for MODERN HOMES

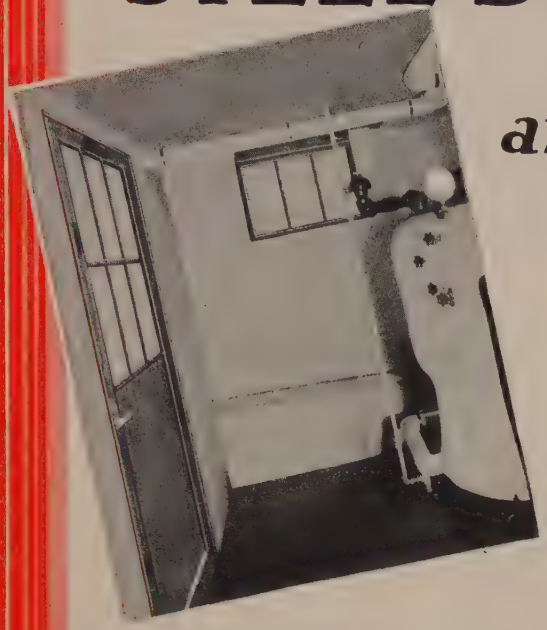
TRUSCON STEEL BUILDING PRODUCTS

UTILITY
STEEL WINDOWS

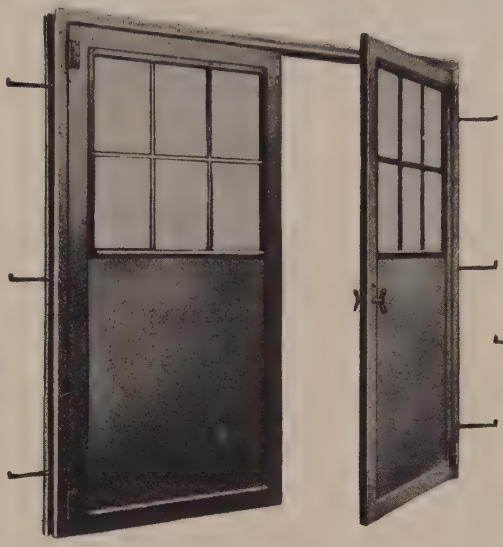
TRUSCON

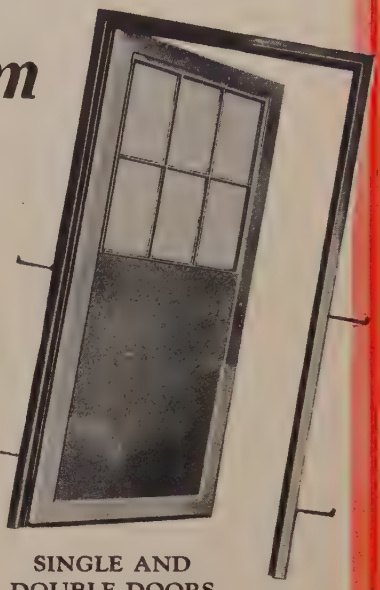
STEEL DOORS *and* FRAMES

for the Garage and furnace room



STEEL LINTELS





SINGLE AND DOUBLE DOORS

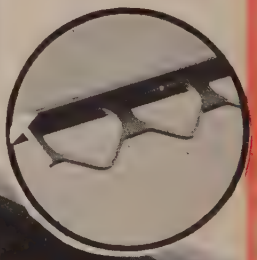
WELDED STEEL FABRIC

WATERPROOFINGS

PERMANENT FIRESAFE CONSTRUCTION

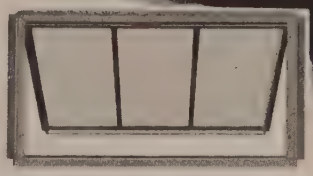
O-T STEEL JOISTS

CURB BARS



GREATER INVESTMENT VALUES

TRUSCON STEEL BUILDING PRODUCTS



STEEL BASEMENT WINDOWS

GENFIRE PRODUCTS THROUGHOUT THE HOUSE

Economical ~ Firesafe ~ Permanent

THROUGH the use of Genfire Products, permanent, firesafe construction is now available at a cost with the reach of any home builder, regardless of the structure to be erected.

Modern homes, built with Genfire Firesafe Products, will not become "old fashioned" in a few years. Requirements for homes are reaching such high standards that, unless modern, firesafe construction is used, the depreciation through obsolescence will be many times the slight increase in initial cost of using Genfire Products. Even the immediate resale value is much higher, and the genuine satisfaction of living in a quality home is priceless.

Steel Casement Windows	Steel Joists	Steel Corner Bead
Steel Basement Windows	Steel Lintels	Basement Waterproofing
Utility Steel Doors	Steel Bridging	Stucco Waterproofing

For details and literature write to

GENFIRE STEEL COMPANY
YOUNGSTOWN, OHIO

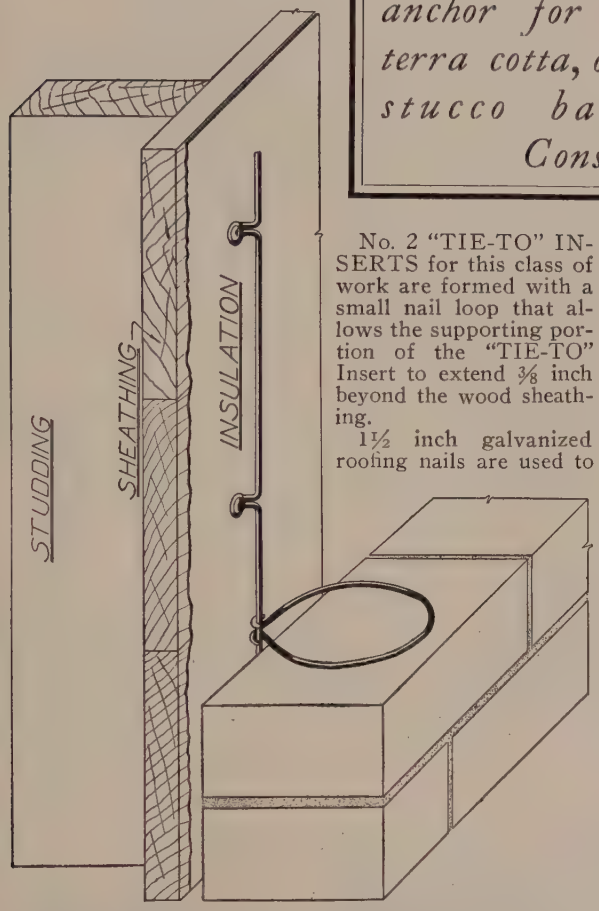
"TIE-TO" INSERT

"TIE-TO" INSERTS Style No. 2 are the new, more modern and simplified method of construction—saving in cost of material, time and labor; and at the same time producing greatly improved workmanship and results.

No. 2 "TIE-TO" INSERTS are being used everywhere, in place of the old methods, and are adopted as standard for all classes of construction.

Acquaint yourself fully with No. 2 "TIE-TO" INSERTS and the advantages they mean to you: and use them on the building you are planning now to erect.

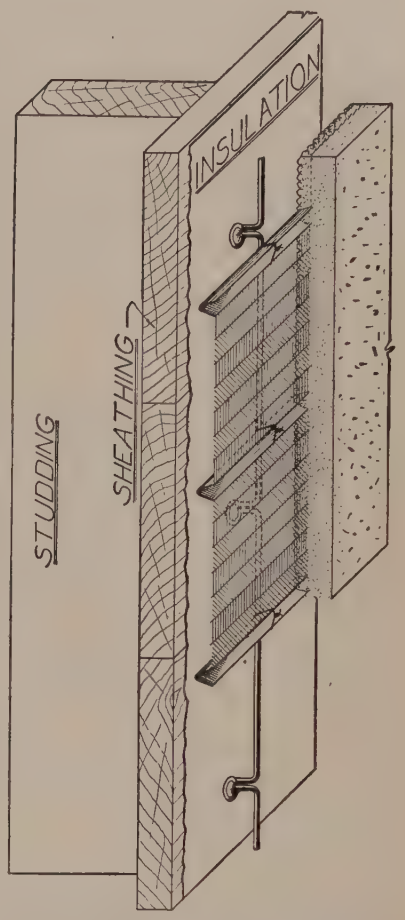
A rapid working tie and anchor for brick, stone or terra cotta, or for metal lath stucco base in Frame Construction.



Brick anchored to the wood sheathing with Veneer Anchor-Ring embedded in the mortar joint. These anchor-rings can be placed in a fraction of a second at any point desired.

No. 2 "TIE-TO" INSERTS for this class of work are formed with a small nail loop that allows the supporting portion of the "TIE-TO" Insert to extend ⅜ inch beyond the wood sheathing.

1½ inch galvanized roofing nails are used to nail these inserts to the wood sheathing on studding points or wood frame construction. The inserts will form a continuous support for the whole height of the wall. For brick veneer a Veneer Anchor-Ring is furnished that slips over the continuous insert and can be placed at any point desired after the wall is started. This eliminates measuring of course heights, saving time and labor in anchoring any type of veneered wall. For stucco same type of insert is used and placed in the same manner, i.e., by nailing to the wood sheathing on studding points to form a continuous support. Metal rib lath is tied to this support. This method allows for a key to hold the stucco, and at the same time provides a ½" insulating air space. Since the Metal Lath is tied to the metal support in place of being nailed to wood furring, *fully 90% of the cracking of the stucco is eliminated.*



Metal lath for stucco fastened to No. 2 "TIE-TO" Inserts nailed to the wood sheathing.

Use These Specifications for "TIE-TO" Inserts

Stucco: Metal lath for stucco shall be fastened to Frame "TIE-TO" Inserts as manufactured by the "TIE-TO" INSERT COMPANY, Milwaukee, Wis. The inserts shall be spaced as directed and the lath shall be tied at each rib where it touches the insert.

Veneer: Brick, stone or terra-cotta shall be anchored with "TIE-TO" Inserts with Veneer Anchor-Rings as manufactured by the "TIE-TO" INSERT COMPANY, Milwaukee, Wis. Inserts and anchor-rings shall be placed as directed.

WRITE IMMEDIATELY FOR COMPLETE INFORMATION

TIE-TO INSERT COMPANY, 874 Layton Boulevard, Milwaukee, Wisconsin

NATIONAL GOLD BOND PLASTER

Manufactured by the NATIONAL GYPSUM COMPANY

Jackson Bldg., Buffalo, N. Y. Conway Bldg., Chicago, Ill.

Purity of National Gold Bond Plaster

"The higher the gypsum content, the stronger the resulting plaster," says the United States Bureau of Standards.

National Gold Bond Plaster is made from the purest gypsum rock. The official tests show the New York rock assays up to 98.16 per cent pure—the highest grade mined in the East. The tests of rock from the Michigan deposit show purity up to 99.76 per cent—less than ¼ of 1 per cent foreign matter. Government and State analyses of other well-known deposits of gypsum range from 70.8 to 93.74 per cent.

A Rich Mix

As a result of its extreme purity, National Gold Bond is exceptionally rich in the mix and carries a high amount of sand.

It works exceptionally well under the trowel and gives maximum strength in the finished job.

Guarantee of Quality and Uniformity

To emphasize the high quality of this product, it is sold under a "Gold Bond Guarantee" which is printed on the back of each bag and reads as follows:

"This National Gold Bond Guarantees that the National Gypsum deposits embrace millions of tons which assay as high as 99.76 per cent in purity; that the National Plaster in this container, like our other gypsum products, has been carefully tested at the mill; that National Plaster exceeds on all points the Standards of American Society for Testing Materials and that, properly used, it will give the best results obtainable."

Quantity Available

The New York deposits of this company cover 1,000 acres and contain 10,000,000 tons of gypsum. The Michigan deposits cover over 1,000 acres and contain 30,000,000 tons of gypsum. Although the plants erected on each property are among the largest of their kind, there is enough high-grade gypsum to last over 100 years.

Specifications

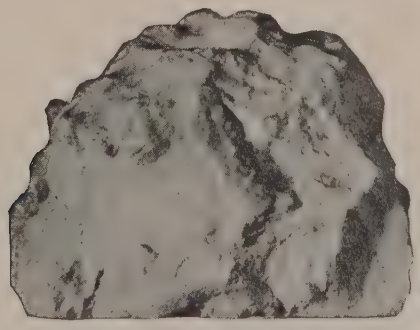
National Gold Bond Plaster is specified and applied in the same manner as is required for good work under the standard specification.

Packing

Shipped in convenient packages. Jute sacks, which are returnable, contain 100 lbs. each. Paper sacks, which are non-returnable, contain 80 lbs.

Products

NATIONAL GOLD BOND PLASTER: Hair Fibered, Unfibered, Wood Fibered, Moulding, Finishing; PLASTERS for concrete surfaces. Also Best Bros.' Keene's Cement.



NATIONAL GYPSUM COMPANY, Jackson Bldg., Buffalo, N. Y.

NATIONAL MINERAL WALL BOARD

Manufactured by the NATIONAL GYPSUM COMPANY

Jackson Bldg., Buffalo, N. Y. Conway Bldg., Chicago, Ill.

Exceptional Qualities of National Mineral Wall Board

Strength—Stronger by actual test than old-fashioned plaster wall board.

Weight—Considerably lighter. One man can handle it.

Fireproof—Highly fire-resisting—being mineral it cannot burn. Bears the Underwriters' label.

High Insulating Quality—The National process creates countless tiny air cells, sealed in the gypsum.

Flexible—Stands far more bending around corners and through places difficult of access.

Reversible—If you mar one side, you can use the other.

Easy to Saw and Nail—Clean edges—no slivering.

Cost—No more than old-fashioned plaster wall board.

Produced—In following standard sizes: 4 x 6 ft., 4 x 7 ft., 4 x 8 ft., 4 x 9 ft., 4 x 10 ft.

Quickly Erected

Because of its lightness National lays up quickly. It saws and nails like lumber. Apply directly to studs and joists. Goes up without dirt and litter over old plaster. Crack-proof.

Absorbs Sound
Takes Any Decoration

Paper, paint, or panel.

The National Properties

The National deposits of gypsum at Clarence Center, N. Y., embraces 1,000 acres with an estimated quantity of 10,000,000 tons of gypsum. The plant erected on this property is one of the largest of its kind in the industry.

The property at National City, Mich., covers over 1,000 acres, with an estimated deposit of 30,000,000 tons. The plant here is slightly larger than the one at Clarence.

These two properties, owned outright by the Company, recognized as providing ample service for a hundred years or more.

The Purest of Gypsum Rock

National Mineral Wall Board is made from the purest gypsum rock used for such a purpose.

The official tests show the New York rock to assay up to 98.16 per cent pure—the highest grade mined in the East.

The tests of rock from the Michigan deposit show purity up to 99.76 per cent—less than ¼ of 1 per cent foreign matter.

The New National Process

A new exclusive process makes it lighter, thicker yet stronger than any old-fashioned plaster wall board.

Buy From Lumber Dealers

National Mineral Wall Board is carried by leading lumber dealers.

Sold Under a Gold Bond Guarantee

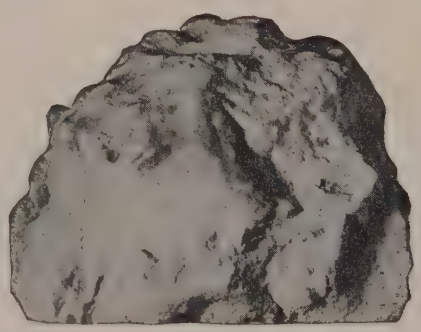
This is the only wall board sold under the Gold Bond Guarantee of its makers.

National

MINERAL WALL BOARD

Gold Bond

Sold under the Gold Bond Guarantee



White as snow. So pure that it frequently comes in crystals. The rock of which National Mineral Wall Board is made.

NATIONAL GYPSUM COMPANY, Jackson Bldg., Buffalo, N. Y.

CELOTEX
BRAND
INSULATING CANE BOARD

FOR SHEATHING

CELOTEX Insulating Cane Board provides tighter, and more permanent walls. It does more than insulate—when used as sheathing it adds bracing strength and withstands all kinds of weather—making houses more permanent and stops cold winds.

Celotex is used as sheathing under wood siding, Shingles, Stucco and Brick or Stone veneer. Then, too, it adds insulation keeping out excessive summer heat and winter cold and saves fuel money.

MATERIAL

Use Celotex Standard Building Board for sheathing all exterior walls. It comes in big, strong board 4 ft. wide from 7 to 12 feet and 7/16″ and ⅞ inch thick. Having a thermal conductivity of 0.33 B.t.u per hour, per square foot, per degree F., per inch thickness.

APPLICATION OF CELOTEX

Framing. Studs shall be framed as in ordinary construction spaced 16″ o.c. 2″ x 4″ headers shall be cut in between framing as a nailing base for all horizontal Celotex joints.

Application of Celotex. Apply all Celotex boards directly to and running lengthwise with the framing with ample bearing for nailing all edges. Leave 3/16 inch joint between all boards. Nail with 1½ inch standard galvanized roofing nails, with ⅜ inch heads starting at top, nailing to intermediate studs first spacing nails 6 inches apart, then around all edges spacing nails 3 inches apart, driving the nails home. Bring boards in close contact with all window and door frames.

(Send for Specification Book No. 23)

CELOTEX BUILDS STRONGER—*The test shows why Celotex builds stronger walls. Two frames are built exactly alike, except that one is sheathed with Celotex, the other with wood sheathing. Under strain from the turn buckle the Celotex frame always pulls the wood sheathed frame out of shape. This is because broad, strong boards of Celotex afford greater diagonal bracing to the walls.*

EXTERIOR FINISHES

Wood Siding. Apply directly over Celotex nailing through to studs. All siding joint shall be cut to butt over studs.

Shingles. Fur out with 1″ x 2″ furring strips nailed horizontally over Celotex to studs, spaced to fit shingles. Nail shingles to furring strips.

Stucco.

1.—*Self Furring Bases.* Beveled wood lath, wire lath, expanded metal lath or other self furring stucco bases shall be applied directly over Celotex nailing or stapling through the Celotex into studs.

2—*Non Furring Bases.*

(a) Wood furring strips shall be nailed vertically over each stud through the Celotex to the stud. Wood, wire or metal lath applied to furring in regular manner.

(b) Metal furring, iron rods or crimped band iron shall be stapled through the Celotex to the studs. Metal or wire lath applied in regular manner.

(c) Self furring nails or staples shall be driven through Celotex to the studs.

Brick or Stone Veneer. Nail ties through Celotex to the studs, lay Brick or Stone in regular manner allowing not less than ½ inch space between Celotex and Brick or Stone.

NOTE: In all cases nails or staples of sufficient length to enter wood backing at least 1″ must be used.

Send for Celotex Standard Building Board Specifications No. 23.

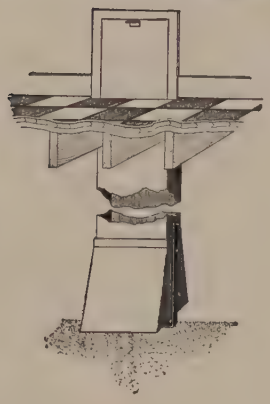
THE CELOTEX COMPANY, 645 N. Michigan Ave., Chicago, Ill.

IDEAL *Red Line* Steel Products

Manufactured by IDEAL STEEL PRODUCTS
308 North Michigan Avenue, CHICAGO, ILLINOIS

6 essentials

for HOMES *and* APARTMENTS

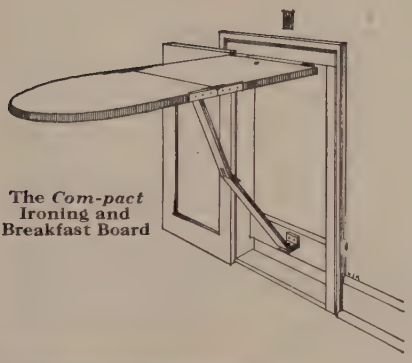


The IDEAL *Steel* Dust Chute

The builder who considers the installation of these six building features *as a group* rather than singly, is the builder who quotes the best prices—builds the best homes and apartments—*gets the most business!*

The fact that these six products are attractively priced has no bearing on their quality, except to improve it as demand increases.

You will receive full details concerning features, construction, and design if you write us in reference to this advertisement.



The *Com-pact* Ironing and Breakfast Board

IDEAL Red Line Basement Window

Frames made from one piece of heavy gauge steel, and welded. Sash is *removable* by our own process. V-sill and cam-action latch makes it water- and weatherproof. Made in 5 sizes.

IDEAL Red Line Coal Chute

Strong, unbreakable, and tamper-proof. Welded throughout. Impervious to rain or snow. Latch released from *inside only*. Made with solid or glass doors for concrete, block, brick, or frame.

IDEAL Milk and Package Receiver

Substantially built from steel, insulated against cold or heat with cork; rust-proofed, and safe when locked against weather. Easily installed in either frame or brick.

Com-pact Ironing and Breakfast Board

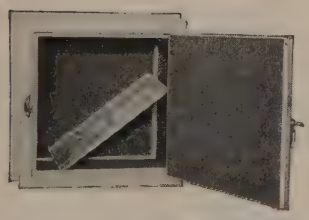
Light, strong, substantial. Board is seasoned and non-warping. Standard opening fits between joists. Can be folded neatly in place when not in use.

IDEAL Steel Clothes Chute

Steel door opens inward, and clothes fall through smooth, steel shaft to basement. Door is self-closing; no drafts can enter through it. Can be installed in but a few minutes.

IDEAL DUST CHUTE

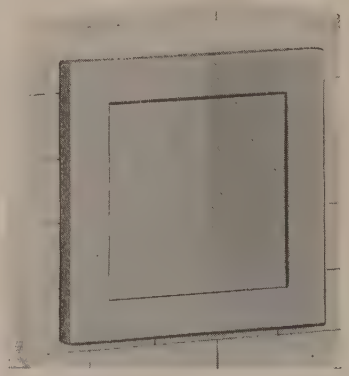
Installed at floor-level of kitchen; sweepings, scraps, or dry rubbish swept into it. Steel shaft descends to receptacle in basement, which can be removed and emptied.



The IDEAL *Steel* Milk and Package Receiver

The IDEAL *Steel* Basement Window

The IDEAL *Steel* Coal Chute



The IDEAL *Steel* Clothes Chute

IDEAL STEEL PRODUCTS, 308 North Michigan Avenue, Chicago, Illinois

FENESTRA RESIDENTIAL WINDOWS

Manufactured by DETROIT STEEL PRODUCTS CO.

2250 E. Grand Blvd., Detroit, Mich.

Fenestra Casements combine the beauty of small panes and slender muntins with the durability of solid steel bars rolled with heavy fillets in all re-entrant angles. Electrically welded corners and interlocked muntins make them exceptionally strong. Fenestra Casements cannot warp, swell, shrink or stick.

Their greater glass area provides better lighting than ordinary windows of the same dimensions. They provide better ventilation because from 75 to 100 per cent of the windows' surface can be opened, as compared to a maximum of 50 per cent in double-hung windows, and the open out swing leaves catch breezes from any one of three directions.

Frame and sash are formed from Z-bars that provide a two-point, flat contact around the entire ventilator for better weathering. Fenestra Casements do not require weatherstrips.

Swing leaves are hung on especially designed solid rolled steel hinges. Bronze hinge pins are fitted into bronze bushings, providing 100 per cent bronze bearing at all moving points to prevent hinge bind.

Fenestra Casements are screened from the inside, which protects the draperies and, due to the extension hinges described above, are easily washed from the inside without sitting on the sill.

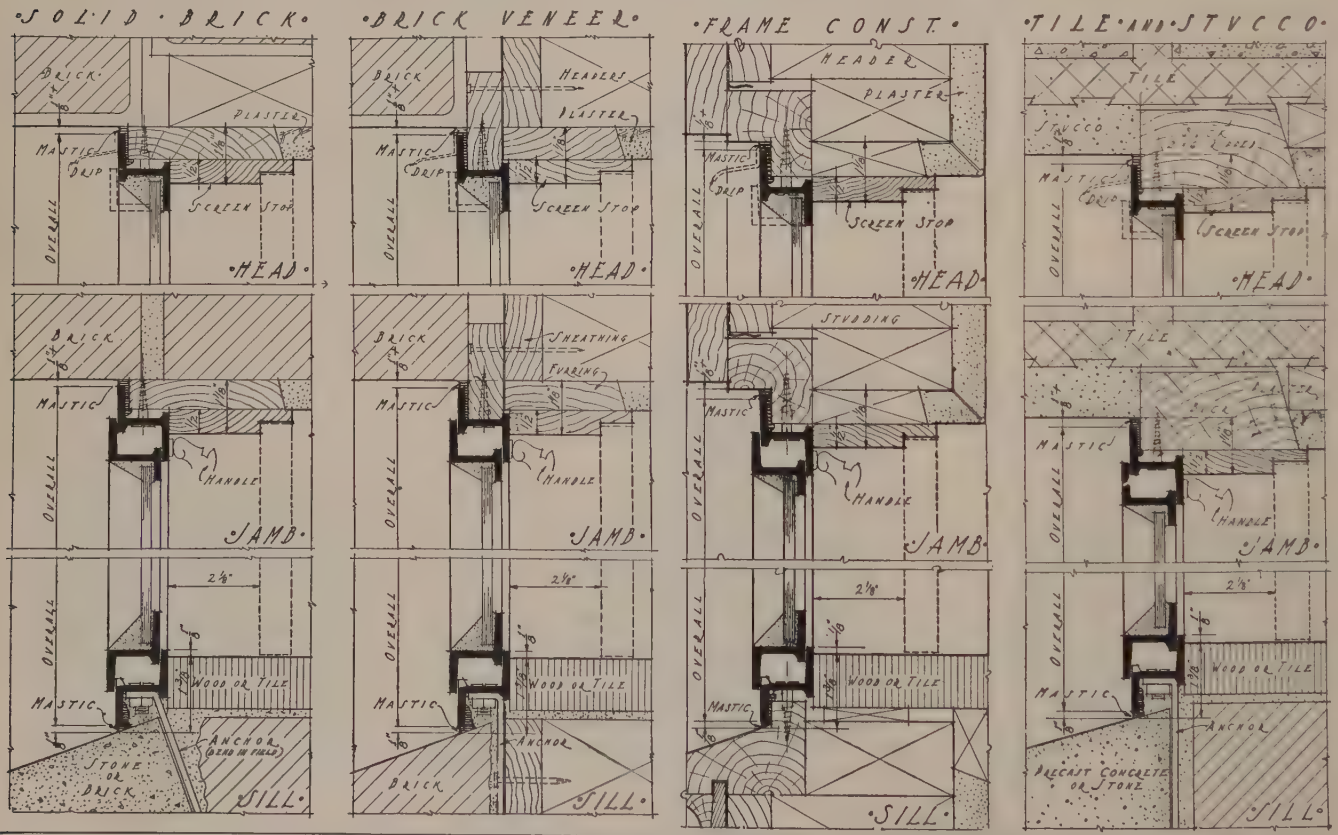
Hardware

All Fenestra Casements are equipped with ornamental bracket, and locking handle, and any one of the three types of stay operator. Hardware, included in the cost of the windows, is in black iron. (Bronze hardware slightly extra.) For operating Fenestra Casements without opening the inside screens, three types of underscreen operators are available at slight extra cost.

Shipped Complete

Fenestra Casements are shipped with sash and frames assembled (stay operators and locking handle separate) ready for installation in any type of construction. Sufficient mastic is included in each shipment of casements, at no extra cost, to seal the joint between the frame of the window and the masonry, or other construction.

TYPICAL INSTALLATION DETAILS



DETROIT STEEL PRODUCTS CO., 2250 E. Grand Blvd., Detroit, Mich.

Units Joined by Mullions

Any number of Fenestra Casements can be combined in one opening vertically or horizontally by means of Fenestra T-bar mullions. Each mullion adds 1/8 inch to the overall width or height of the units joined.

Symmetrical Combinations

Units of the same height may be combined horizontally, and units of the same width may be combined vertically. Suppose you want to fill an opening 6 ft. 4 in. wide by 5 ft. 8 in. high. In the table below, you will find a width dimension of 6 ft. 3 in., and a height dimension of 5 ft. 6 7/8 in. These will probably be close enough for your purpose. In the columns to the right of these figures, you will see that you need two units, each four panes wide, to make the width and two units, one three panes high, and one two panes high, to make the height. Look in the chart at the right to find the units meeting these requirements. You will need two 4326 units, with two 4224 units above them, to fill the opening, with two mullions to join them.

•HEIGHTS•

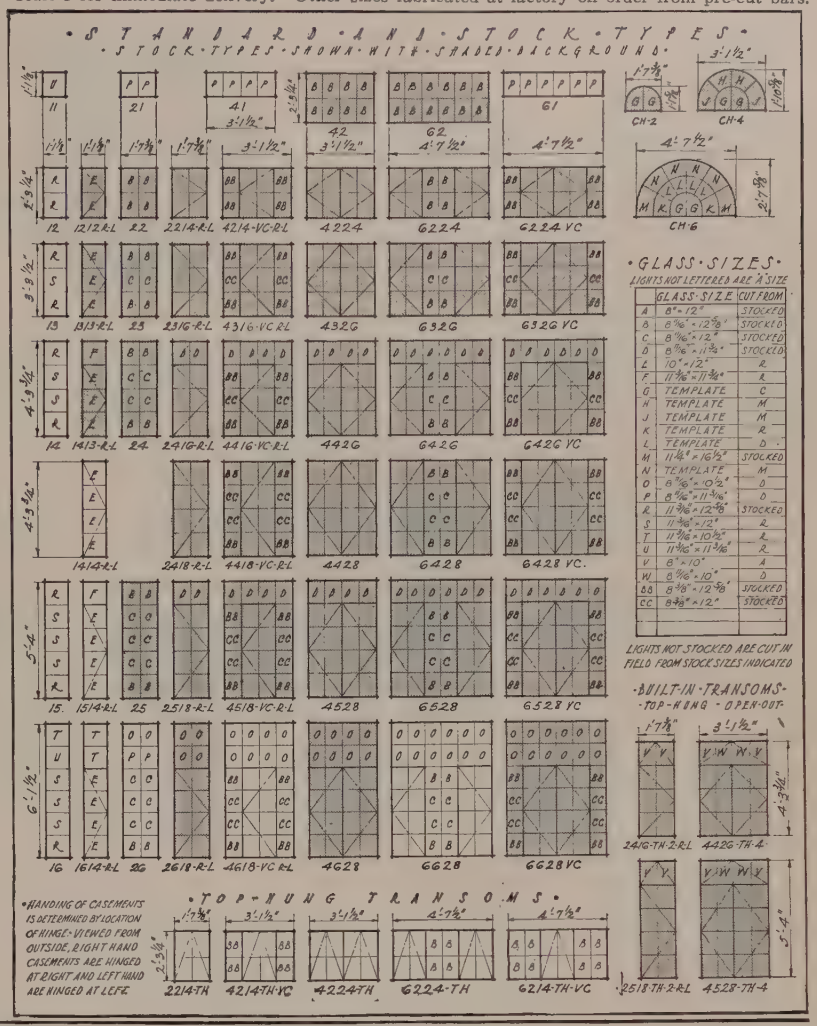
STANDARD HEIGHTS	PANES HIGH	UNITS HIGH	PANES PER UNIT	MULLS WALL
2'-3 1/4"	2	1	2	0
3'-3 1/2"	3	1	3	0
4'-3 3/4"	4	1	4	0
4'-6 5/8"	4	2	2,2	1
5'-4"	5	1	5	0
5'-6 7/8"	5	2	3,2	1
6'-7 1/8"	6	2	3,3	1
6'-7 1/8"	6	2	4,2	1
7'-7 3/8"	7	2	4,3	1
8'-7 5/8"	8	2	4,4	1

•WIDTHS•

STANDARD WIDTHS	PANES WIDE	UNITS WIDE	PANES PER UNIT	MULLS WALL
1'-7 5/16"	2	1	2	0
3'-1 7/16"	4	1	4	0
3'-2 3/4"	4	2	2,2	1
4'-7 1/2"	6	1	6	0
4'-10 3/16"	6	3	2,2,2	2
6'-3"	8	2	4,4	1
6'-4 5/16"	8	3	2,4,2	2
6'-5 5/8"	8	4	2,2,2,2	3
7'-10 3/8"	10	3	2,6,2	2
7'-10 11/16"	10	3	4,2,4	2
8'-1 1/16"	10	5	2,2,2,2,2	4

Stock Types and Sizes

Sizes shown with dark background stocked in Fenestra warehouses and by Fenestra dealers for immediate delivery. Other sizes fabricated at factory on order from pre-cut bars.


•STANDARD•AND•STOCK•TYPES•
•STOCK•TYPES•SHOWN•WITH•SHADED•BACKGROUNDS•
•GLASS•SIZES•
LIGHTS NOT LETTERED ARE 'A' SIZE
LIGHTS NOT STOCKED ARE CUT IN FIELD FROM STOCK SIZES INDICATED
•BUILT-IN•TRANSOMS•
•TOP-HUNG•TRANSOMS•
•HANDING OF CASEMENTS IS DETERMINED BY LOCATION OF HINGE•VIEWED FROM OUTSIDE, RIGHT HAND CASEMENTS ARE HINGED AT RIGHT AND LEFT HAND ARE HINGED AT LEFT.

FENESTRA BASEMENT WINDOWS

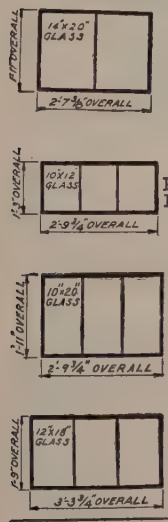
Fenestra Basement Windows are manufactured from solid rolled steel casement sections. Sill and jambs are formed from one continuous bar for rigidity. This bar is mitred and turned at the sill corners while at the head the bars are mortised and tenoned. A rolled drip is provided at the sill for weathering. Anchorage and weathering at the jambs are obtained by a continuous steel fin which projects into the masonry.

Two-point, flat contact is provided around the entire ventilator. Ventilators open in, and are hung on steel hinges of "pinless" hook design that permit the sash to be easily removed for glazing. Sash cannot be removed accidentally or from the outside.

The sill bar of the sash is notched to ride over a tapered and slotted angle, riveted to the sill bar of the frame. The tapered angle centers automatically, and a heavy wedge is inserted into the slot to lock the window. This wedge is attached to a ring on a chain, riveted to the sash, to hold the window open.

Fenestra Basement Windows are shipped completely assembled, painted one priming coat, and ready for installation in any type of construction. Sold exclusively through dealers in the four types and sizes shown at the left.

Basement Sizes



FENESTRA GARAGE WINDOWS

Designed for use in small buildings such as private garages, filling stations, shops, stores, and basements high above grade, the Fenestra Garage, or Utility Window offers all the advantages of steel window construction—more light and better ventilation, greater ease of operation, and protection against fire. The window is shipped completely assembled, and can be installed with exceptional ease in any type of construction. It fits concrete block exactly.

The window comes only in one size—3 ft. 4 1/2 in. wide by 3 ft. 7 1/2 in. high, with 1/2 in. extra outside these dimensions for anchorage in the building. The window is three lights wide and two lights high, the upper row of lights forming a ventilator 22 in. high pivoted 2 in. above center, and provided with a stay bar which permits 20, 40, or 60 degree opening.

Stocked by dealers for immediate delivery.

DETROIT STEEL PRODUCTS CO., 2250 E. Grand Blvd., Detroit, Mich.

THE CASEMENT HARDWARE CO.

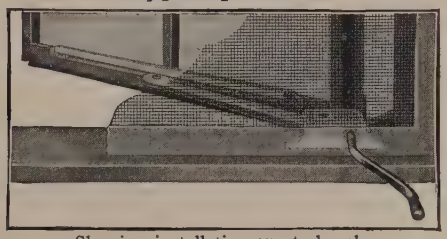
406 N. Wood St., Chicago, Ill.

CASEMENT HARDWARE — Win-Dor Casement Hardware — HEADQUARTERS SINCE 1906

Win-Dor casement hardware offers architect, builder and owner the means of making casement windows as convenient as they are beautiful. Win-Dor Operators and Stays afford automatic, positive control for casement sash that is inconspicuous and inexpensive.

See your building material, hardware or steel sash dealer or write us direct.

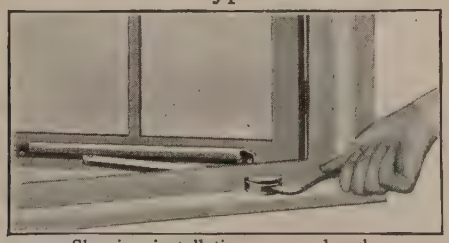
Win-Dor Series No. 25 Through the Screen Gear Type Operator.



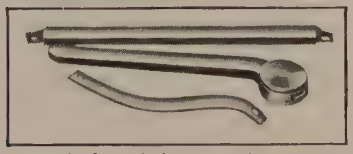
Showing installation on steel sash.

Adaptable for either Wood or Steel outswung casements, this Operator provides instant adjustment of the sash through the screen. It is non-friction, positive locking and automatic. The window can be either opened or closed in just four turns of the handle. Handles can be permanent or detachable and operation is efficient through any screen, wood, metal or rolling. Series 25 operators are made in steel, rust proof finish only or brass in any finish.

Win-Dor Series 7 Through the Screen Direct Acting Type.

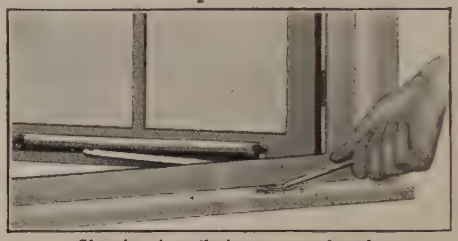


Showing installation on wood sash.



This operator is designed for wood casement windows. It is the simplest and lowest priced through the screen operator made. Series 7 Win-Dor Operator combines the utmost in utility and satisfactory casement control. A downward pressure releases the lock and permits opening or closing the sash. Release of handle locks the casement securely. The action is simple, dependable and positive. Series 7 operators are made in steel, rust proof finish only or brass in all standard finishes.

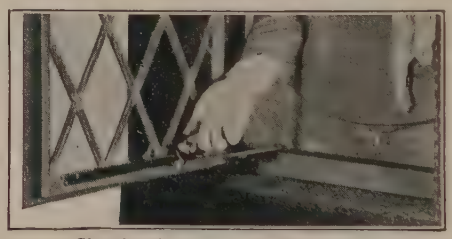
Win-Dor Series No. 24 Under Screen Direct Acting Operator



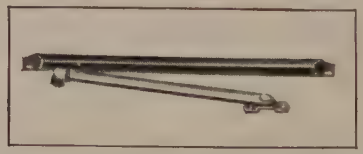
Showing installation on wood sash.

Series 24 Operator is mortised flush with window stool making it particularly inconspicuous. The action is the same as Win-Dor Series 7 Operators, simple, positive and certain. The sash is always under control, yet easily and quickly adjusted in any position. Series 24 operators are furnished in solid brass only, in all standard hardware finishes.

Win-Dor Series 61, Casement Stay, Self Locking Type.



Showing installation and operation on steel sash.



Where conditions do not require window screens for casement sash, Win-Dor Series 61 casement stays afford low cost window control. An easy lift of the handle releases the lock and permits swinging the sash to any position. The channel attached to the sash in which the stay arm travels, is the same as used with all Win-Dor operators. Series 61 Stays are made in steel, rust proof finish only or solid brass in all standard finishes.

THE CASEMENT HARDWARE CO., 406 N. Wood St., Chicago, Ill.

"AiR-Way" Multifold Window Hardware

Cable Address
"Richwilco Aurora"

Richards-Wilcox Mfg. Co.
"A Hanger for any Door that Slides"
AURORA, ILLINOIS, U.S.A.

Canadian Factory
London, Ontario

BRANCH OFFICES

New York City, 85 Walker Street
Chicago, 166-168 West Lake Street
Philadelphia, 507 Arch Street
Boston, 124-126 Pearl Street
Cleveland, 459 Hippodrome Annex
Kansas City, 206 Reliance Bldg.
Cincinnati, 512 Provident Bank Bldg.
St. Louis, 2006 Locust Street
Indianapolis, 1939 N. Meridian Street
Minneapolis, 321 Plymouth Bldg.
Los Angeles, 500-501 Hibernian Bldg.
San Francisco, 626 Underwood Bldg.
Omaha, 202 203 City National Bank
Seattle, Wash., 1214 Hoge Bldg.
New Orleans, 616 Hibernia Bldg.
Detroit, 705 Donovan Bldg.

Richards-Wilcox Canadian Co., Ltd London, Ont., Winnipeg, Montreal.

Sunshine and fresh air

Perfect Ventilation in Every Room!

The R-W Way Costs No More!

Window openings equipped with AiR-Way Multifold Window Hardware assure the desired amount of ventilation in any season.

When open the sash slide and fold to one or either side leaving a clear opening the full width and depth of the frame —there is no interference with screens or drapes.

The sash may be adjusted at any point to admit any desired amount of fresh air without draughts. When closed the windows are weather tight and rattle proof.

AiR-Way is furnished in complete units with hardware fitted to either steel or wood sash and assembled in frames ready to set in openings. Hardware is also furnished for assembly on the job if desired.

AiR-Way Multifold Window Hardware, Garage Door Equipment, Vanishing House Door Hardware, Garage Door Bolts, locks and floor guides, Builders and Brackets and Hardware Specialties. For Garage Hardware see pages 158-159.

Garcy Clothes Closet Garment Carriers

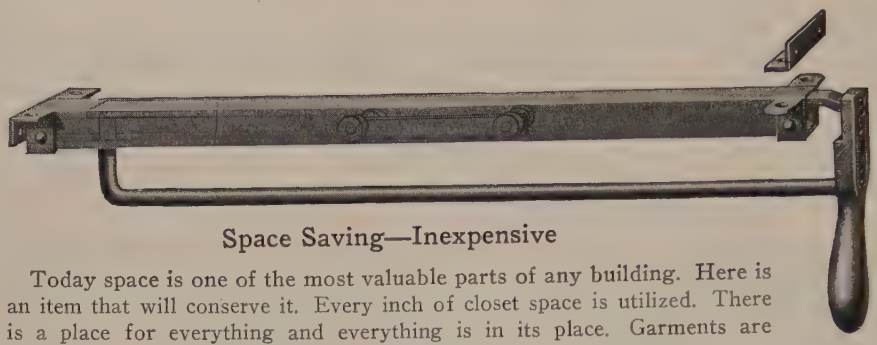
Made by
GARDEN CITY PLATING
& MFG. CO.

GARCY

1430 South Talman Avenue
CHICAGO

The Product:
An extension garment carrier that is revolutionizing clothes closet design. It doubles the clothes hanging capacity and greatly reduces the space required.

Where Used:
Garcy garment carriers can be used to great advantage in homes, hotels, schools, clubs, factories, offices, lodges and churches.



Space Saving—Inexpensive

Today space is one of the most valuable parts of any building. Here is an item that will conserve it. Every inch of closet space is utilized. There is a place for everything and everything is in its place. Garments are selected easily and comfortably in the light and air of the room.

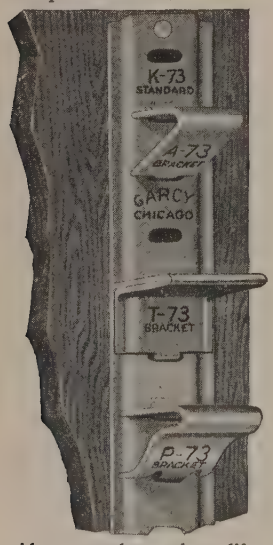
The fixtures are inexpensive and pay for themselves many times over in space saved, convenience and comfort.

Easy to Install—Easier to Operate:
A few minutes with a screw driver and the carriers are installed. They fasten under a shelf or to the back wall and inside of door casing. A mere touch of the hand and a row of garments glide in or out on ball or roller bearings, smoothly and noiselessly.

You can construct any combination of compartments, drawers and shelves to fit the space available.

Advantages:
Garcy pull-out equipped clothes closets will actually hold twice as many garments and keep them in better condition than old-fashioned closets occupying double the floor space. Clothes are so easy to get at, there is no groping in the dark. No crowding, tearing or stretching of garments on the hooks. Convenience and accessibility instead of irritating chaos.

Construction and Sizes:
Made in all sizes from 15 inches up. They are sturdy, easy rolling, and quiet in operation. Made of steel, Nickel Plated or in the popular Statuary Bronze finish. Nothing to get out of order. Will outlast the building.



Above are shown three different styles of Brackets as they are set into the standard slots. Note how neat this equipment really is!

FOR ADJUSTABLE SHELVING

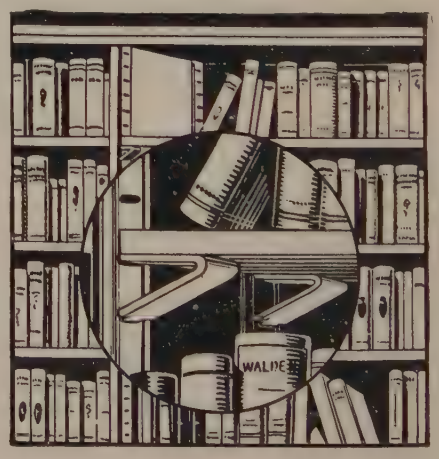
Use "Garcy" Pilaster Strips and Brackets

Simplest and most economical method for shelving in bookcases, pantries, china closets, medicine cabinets, etc.

Easy to install. Pilasters are fastened with nails or screws. Brackets are snapped into the slots, which are spaced at half-inch intervals.

Brackets are easily removed, yet will not budge under the heaviest load.

Write for Free Samples



GARDEN CITY PLATING & MFG. CO., 1430 S. Talman Ave., Chicago, Ill.

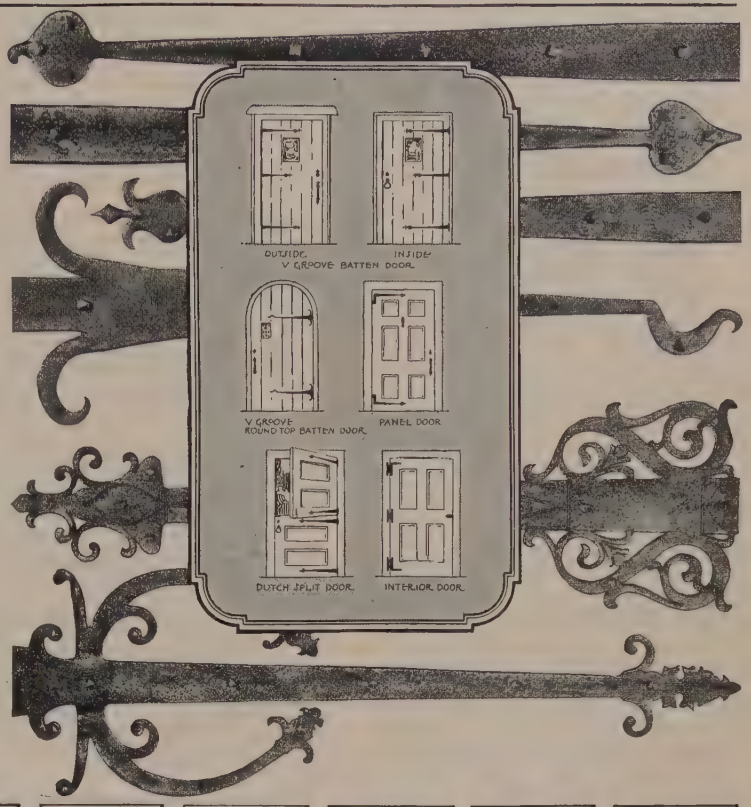
McKINNEY FORGED IRON HARDWARE

Made by McKINNEY MANUFACTURING CO.

PITTSBURGH, PA.

Forged Iron Hardware

McKinney has brought genuine forged iron hardware to a point where it is now available for houses of most modest pretensions. The designs are authentic of the best creations of metal craftsmen of earlier centuries. They have caught the very spirit of the sturdy iron itself, and in the rugged texture, beaten and shaped, reflect artisanship of the highest order.



All Essential Pieces

Six master designs may be had. These are, from top to bottom of the accompanying illustration: Curly Lock, Heart, Tulip, Etruscan, Alhambra, Warwick. The entrance handle sets shown are in the same order from left to right. In addition to the pieces shown, there are H & L hinge plates, shutter dogs, cabinet latches and hinges, foot scrapers, knockers, mail boxes, chimney irons—everything to outfit a home complete from entrance gate to chimney.

Easily Available

McKinney Forged Iron Hardware is sold by leading builders' hardware dealers everywhere. Most of them carry a stock, for immediate delivery. If not, they can get any desired pieces quickly from McKinney Manufacturing Company.

Lanterns

Fabricated of forged iron and rust proofed. Complete with crackle glass, and either wall bracket or three-foot length of chain for over-head suspension. All sizes for all uses.

15102 BELFRY

15103 NIGHTWATCH

15100 SALEM

15101 WAYFARER

15104 WICKET

15105 CLOISTER

McKINNEY MANUFACTURING CO., Pittsburgh, Pa.

CORBIN Locks and Hardware for the Home

Manufactured by
P. & F. CORBIN
The American Hardware Corporation, Successor
NEW BRITAIN, CONN.

Branch Offices and Warehouses

323 West Randolph St.
Chicago, Ill.

402-404 Finance Building
Philadelphia, Pa.

101 Park Avenue
New York, N. Y.

Have you suffered from the annoyances due to insecure locks, spotty finishes, rust streaks on the woodwork, pulleys that break the sash cord, rattling knobs, catches that don't catch and other imperfections in the home hardware? Reading and heeding the suggestions that follow will save you from such trouble in your new home.

The hardware of a home has an importance out of all proportion to its cost. It is one of the minor details of the building and it is one of which the home owner usually knows but little, but it can make or mar the comfort of the home. It can breed a sense of irritation which is never ending and is out of all proportion to its cash value, or it can fit into the scheme of things in a delightful way which makes every door, every window, every drawer or cupboard a pleasure in its handling. It is the mechanism upon which the life in the home depends and it is well worth the attention required to have it right.

Often the difference between hardware which is satisfactory and that which is not, is in the choice of type or style. More often it is caused by shaving the cost by the selection of hardware which is cheaper—with a little less care in manufacture, a crudity of form or slighting of details—a very slight saving in cost, which the thoughtful owner cannot afford to chance for the small reduction of the initial investment. The cost of the hardware is but a small percentage of the total cost of the building, and any saving at the expense of quality is inconsiderable, particularly when the cost is spread over all the years in which the home is in use, with constant pleasure caused by good hardware and never-ceasing annoyance resulting from poor equipment. Besides, there is an expense as time rolls on for replacements and repairs where the hardware is imperfect, which in the end will more than balance any saving in initial cost.

We have carefully examined the plans in this book. Our estimators have prepared a detailed schedule of the hardware for each, selected with due consideration of the type of building, the service required and the importance of keeping the cost as low as possible commensurate with proper service. This schedule is supplied to the contractors with each set of plans and is available for the use of the home owners. Corbin dealers will quote prices on application. We have sought in this way to ensure the adoption of a hardware equipment which will be truly economical to purchase and will add to the pleasure of the home. Additional information will be cheerfully given upon application to a Corbin dealer whose address we shall be pleased to furnish.

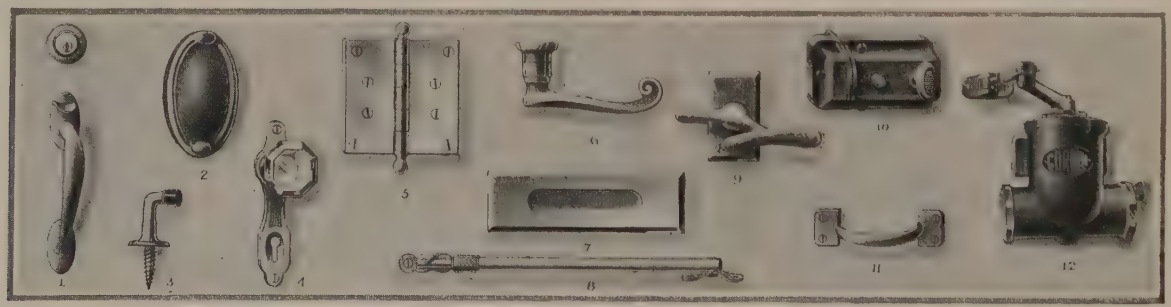
Our estimators recommend, and specify in their schedules, hardware made of brass and bronze. It is our experience, based on long and intimate contact with the problems of hardware equipment for homes, that it is extravagant and wasteful to use hardware which will rust, with consequent destruction of finish, streaking of adjacent woodwork and general deterioration which will eventually make a replacement necessary. The difference in first cost is slight: the difference in service, appearance and satisfaction is great. Be sure that the hardware used is brass or bronze, and not steel plated in exact reproduction of those metals.

In considering the hardware, there are many differences or chances for choice. There are, as well, certain features which experience has shown worthy of attention. All of these have been covered in the list of recommended hardware, and may be briefly summarized as on the following pages.

When you build that
"little house o' dreams'

remember

Good Buildings Deserve Good Hardware
CORBIN



1. Entrance Door Handle. 2. Entrance Door Knocker. 3. Door Stop. 4. Interior Door Escutcheon With Glass Knob. 5. Door Butt. 6. Lever Handle. 7. Letter Drop. 8. Casement Adjuster. 9. Casement Fastener. 10. Night Latch. 11. Bar Sash Lift. 12. Door Check.

P. & F. CORBIN, New Britain, Conn.

The Front Door

Good Hardware Is Impressive

This is easily the most important opening in the home. When a person approaches the house he first notes the general appearance—the style or type, as Colonial, Early English, Spanish, French or purely modern American, and its main details of outline and proportion. His attention is next focused upon the entrance, and the impression created by the larger view should be made very definite here. It should furnish the identifying hall mark of the period or school. If the hardware is in harmony with other details, the proper effect is produced: if it is not, there is a discord which leaves an unpleasant impression. There are many designs of Corbin knobs and escutcheons or of door handles, so that just the right one can be used: there are Corbin door knockers and hinge straps for use where they are fitting: there are Corbin push buttons to match the other items selected. There are butts of brass or bronze, impervious to rust and of the proper strength to carry the door.

Functions of a Modern Front Door Lock

The lock should afford security. In the modern front door lock a thumb piece is used to lock the door from the inside, the key being used on the outside only. Pushing a stop in the face of the lock makes the thumbpiece of the handle or the outside knob rigid, so that a key must be used to enter, although a person can freely pass from the inside of the house, the door being locked when closed. A convenience when leaving the home especially when persons are gloved and coated, since no key need be used. Locks of this type are furnished for use with any of the knobs and escutcheons or door handles in the Corbin line.

May be had with handle or with knob outside.

For the Front Door, as well as any other outside door, we strongly recommend a cylinder lock, which will give the highest degree of security.

Grade, Side and Rear Entrance Doors

Here a more modest equipment is desirable. The style of the door, as well as its uses, suggests unobtrusive hardware, of brass or bronze, not affected by the weather, with a cylinder lock for security and a good butt for every two and a half feet in height—the government standard. The design and finish of the hardware should also be in harmony with the type of the building.

Good Butts will not let doors sag

It is a frequent practice to have the locks for all outside doors made to fit the same key, adding to the convenience; or to have the front door key act as a master for other entrances and garage locks, the keys to which will not operate the front door lock, giving the owner entrance to all doors with one key, but requiring servants to use the side or rear entrance. Any Corbin dealer can supply this combination

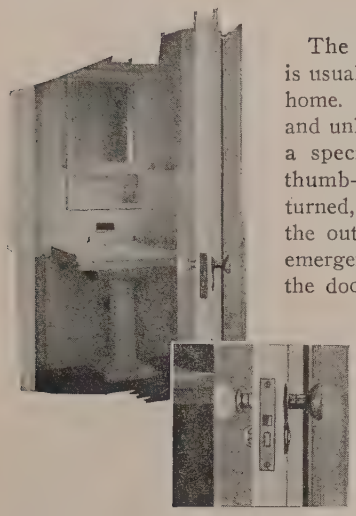
Inside Room Doors

A neat, simple knob and key plate is always in good taste.

Here there is an opportunity for good taste in selection, and Corbin affords a wide range for choice. The locks provide privacy rather than security, and are less expensive than those for outside doors. In the main living rooms the design and finish should have some effect of style, and all of the doors in each room should have the same hardware. In the intimate household portion, simplicity is in order. There is usually an absence of decoration, with plain knobs and escutcheons (or key plates) and good butts.

P. & F. CORBIN, New Britain, Conn.

Bathroom Doors



The Thumb-Turn, inside, takes the place of a key.

The lock to the bathroom door is usually the one most used in the home. It should be easily locked and unlocked, and Corbin provides a special bathroom lock with a thumb-turn on the inside, easily turned, always in place. A key on the outside permits entrance if in emergency it is necessary to open the door when it has been locked from the inside, as in case of sudden illness of an occupant, or little children having locked themselves in. Such instances are more frequent than is generally comprehended. It is no uncommon thing for a fire department to be called to gain entrance through a window to a bathroom where helpless individuals have locked themselves in.

The finish of the bathroom hardware is usually nickel or chromium—cleanly, sanitary and not affected by moisture.

Closet Doors

Thumb-Turns can be used on inside of closet doors, instead of knobs.

A closet should have the same hardware as that upon the door of the room in which it is located. Mortise latches, which are like locks except that they have a latch bolt only and cannot be locked, may be employed instead of locks if security of contents is not desired, but in every home there should be at least one closet with a good cylinder lock in which valuables may be stored or contents protected from unwarranted inspection. This is a convenience often overlooked, but well worth while. A Corbin Cylinder night latch, with nothing but the round cylinder head visible from the outside is excellent here.

Children in play hide in closets. Adults occasionally are accidentally imprisoned in them. It is highly important that every closet door should be easily opened from the inside, and there should be an inside knob or easily manipulated thumb-turn on every closet door.

1. Glass Knob and Key Plate. 2. Brass Knob and Key Plate. 3. Door Knocker. 4. Ring Drop Handle. 5. Door Handle. 6. Door Knob. 7. Sash Fastener. 8. Sash Lift. 9. Lever Handle. 10. Surface Bolt. 11. Door Butt.

In the Kitchen and Pantry

Cupboard Catches are in constant use. They too, should be Good Hardware.

Steam from kettles, vapors from hot food, moisture from damp fingers all suggest the use of a nickel or chromium finish, which is not affected by these conditions, and which harmonizes with the white of the interior finish generally employed. Cupboard and cabinet doors swing continually, and should have butts heavy enough and strong enough to prevent the doors from sagging. For the drawers, Corbin provides pulls of generous dimensions with ample hand room. There are two types, one with a rolled edge which prevents the fingers from slipping, and bar handles especially convenient for drawers near the floor, as they admit the fingers from above as well as below.

The cupboard turns on the cabinets are in constant use. It is essential that they operate freely and positively. Corbin provides these with oval knobs which are easily turned, and latch bolts which snap into instant action with little friction. A hook for the hand towel, nickel plated, is also a Corbin item.

The door to the pantry should swing freely in both directions upon a floor hinge which will stop it, when at rest, in alignment with the frame: and there should be a push plate upon each side, of suitable shape and size.

Double Hung Windows

Corbin Sash Pulleys never bind

Here is a frequent source of trouble. The hardware cannot overcome the sticking of sash due to imperfect fitting or to paint, but it can eliminate all the other annoyances which are met here. Corbin pulleys run true, with the sheaves accurately centered and properly grooved and are so made that wear cannot affect their operation. Lifts have ample finger room. Fasteners are secure, drawing the two sashes so tightly together as to prevent rattling, or the insertion of forcing tools from the outside, while their levers are so made that they can only be moved by the hand from the inside.

P. & F. CORBIN, New Britain, Conn.

Casement Windows

Corbin makes concealed casement operators.

These should have butts which the weather cannot affect, especially when they swing outward. The pins should be fast, so that it is impossible to remove the sash from the outside by withdrawing the pins. Or, when the sash fits into the ordinary recess, loose joint butts may be used, since the sash must be lifted to release it.

A casement fastener has two functions—to secure the sash, and to draw it so tightly against the frame as to exclude draughts. Corbin fasteners do both.

Casement Adjuster—easy to operate

It is important that the adjuster holds the sash firmly at any opened position, against contending draughts, and without rattling. The fastening must be secure, and the slide permit easy action. These qualities are found in the Corbin adjusters recommended in the schedules.

Cremone Bolts, for casements swinging in.

When the sash swings outward, screens are applied on the inside, hung on butts and provided with small knobs and friction catches. These are usually finely finished and left in position throughout the year.

1. Door Handle. 2. Knob and Key Plate. 3. Casement Fastener. 4. Door Bolt. 5. Door Knocker. 6. Cabinet Hinge Plate. 7. Door Hinge Plate. 8. Knob and Escutcheon. 9. Electric Push Button.

French or Glass Doors

A typical Corbin French Door Lock set with Lever outside.

These have problems of their own. The narrow wood-work of glass doors require locks especially made for such use. Lever handles are used on one side, to keep the hand well away from the frame and preventing the skinning of knuckles. The brass or Bronze butts should be heavy enough to carry the load without undue wear and have three to each sash over five feet in height.

A Cremone Bolt holds the inactive door

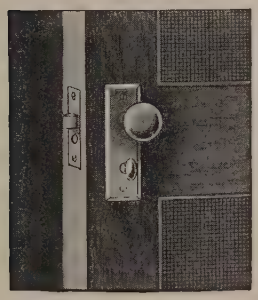
When these are in pairs, bolts are used upon the standing or idle leaf to secure it in ordinary use, and to provide quick release when both are opened. These are of various types—bolts which run the full length and are released at both top and bottom by a turn of a handle or separate top and bottom bolts with convenient knob handles. There is no reason why even the largest French or glass doors in sun parlors should not be as easily operated as ordinary doors, and Corbin hardware is made to provide this desirable condition.

P. & F. CORBIN, New Britain, Conn.

Built-In Cabinets

For china closets, linen closets, and built-in buffets, Corbin provides friction catches which are not visible, small knobs of metal or glass, with machine screws which pass through the door and cannot work loose, and good butts of various sizes. When the doors are in pairs, a simple book-case bolt fastens the idle leaf. Butterfly hinges and bar latches of the styles used in Revolutionary days are effective in homes of a Colonial type.

The Screen Door



These Catches are secure

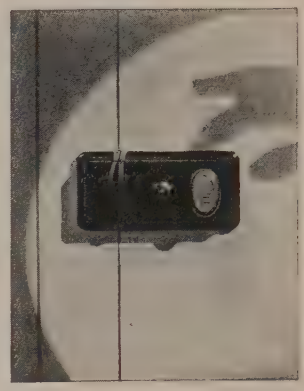
Too often, the screen door, placed over a carefully designed front door destroys the effect by its faulty action or appearance. Surely such a screen door deserves good hardware, which will not only give prompt and proper service but which will present an attractive appearance. Good catches which can be securely locked so that the main door can be left open on hot nights: butts strong enough to keep the door from sagging and with loose pins which facilitate removal when the fly-time is over: silent checks which eliminate the noisy bang caused by the springs too frequently used.

Corbin Screen Door Checks can be applied between screen and house doors. They make screen doors quiet.

1. Door Handle. 2. Knob and Key Plate. 3. Case-3. Door Knocker. 4. Door Handle. 5. Key Plate. 6. Butterfly Hinge. 7. Shutter Dog. 8. Rim Knob Latch. 9. Bar Latch. 10. Hinge Plate.

The Little Conveniences

Aside from the equipment of the various openings, there are many places where hardware, the home mechanism, plays an important part. Storage cupboards and outside cellar doors require secure locks and here the Corbin night latch is most suitable. Every closet must have its garment hooks, which should be well made, well finished and strong. Door stops prevent the knobs from injuring the plaster, when doors are swung wide open. Door checks keep outside doors closed, or hold them open so that chairs or the baby carriage may be passed through without interference. Letter drops meet the Postal Department's requirements for mail receptacles on free delivery routes. Cellar windows need secure fastenings. A razor-strop hook is a welcome adjunct to the bathroom. All these needs, and others found in the home are satisfied by Corbin products carried by the Corbin dealers.



The Corbin Night Latch for any door where inexpensive security is wanted.

Don't skimp on hooks. You can have good ones for every purpose.

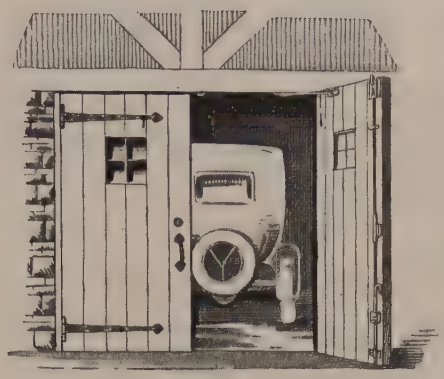
Door Holders are handy to keep doors ajar at any angle.

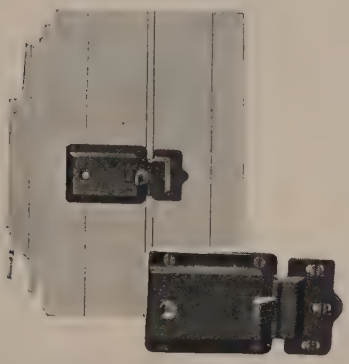
A Corbin Door Check keeps the door closed—saves fuel.

P. & F. CORBIN, New Britain, Conn.

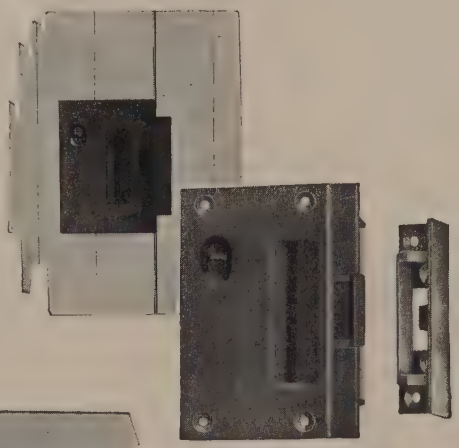
The Garage

Special equipment to meet special requirements. Cylinder night latches for pass doors. Automatic bolts and secure locks for the large doors with holders to keep them open in any wind. And all of a quality which compares favorably with the hardware in the home and will give long service without cost for maintenance. The hardware of the garage should provide the same security and convenience as in the home itself.



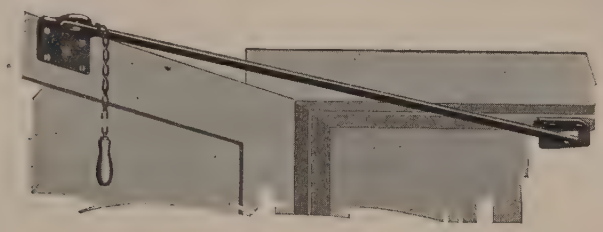


A sturdy Cylinder Lock for single or pairs of swinging doors



Cylinder Lock for sliding doors.

Just pull up on the handle and the door is free to open.



A Convenient Door Holder

The foregoing is very general in its terms; necessarily so since it covers the subject of the hardware for the large variety of homes planned in this book. More specific information accompanies each set of plans or can be secured from any dealer in Corbin hardware. The address of the nearest Corbin dealer will be gladly supplied upon request. He will be found able to serve you to your advantage.

So, when you are considering the materials to be used in your new home, give proper thought to the hardware equipment. The contractor will gladly submit the Corbin schedule he received with the plans. Ask him for it and give it a little study. This is one of the easiest methods of avoiding annoyance and expense through the years in which the home is in use.

Good Buildings Deserve Good Hardware

P. & F. CORBIN
NEW BRITAIN, CONN., U. S. A.

CORBIN

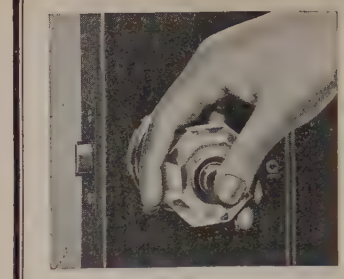
Branches:
NEW YORK CHICAGO
PHILADELPHIA

P. & F. CORBIN, New Britain, Conn.

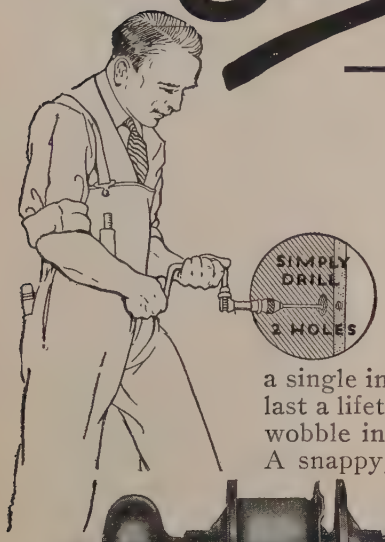
The MODERN *Lock for* MODERN *Buildings*

SCHLAGE *Button* LOCKS

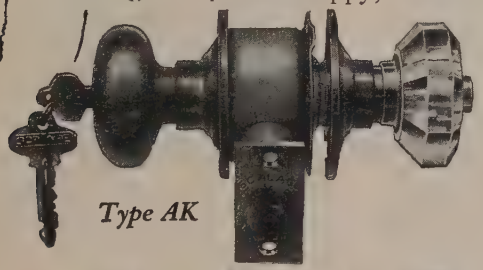
—safety and convenience in distinctive modern form



TO LOCK
just press the button in the knob
TO UN-LOCK
just turn the knob



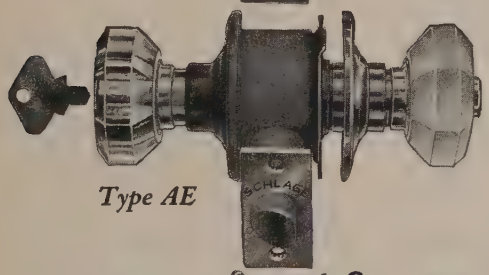
In any place where people take pride in the appearance and convenience of things, SCHLAGE Locks are the necessary finishing touch to modern completeness. Think of never having to hunt keys to lock doors, the wonderful convenience of simply pressing a button or turning a knob. Notice the artistic proportions and dignified simplicity of the SCHLAGE Lock. Perfect symmetry of line and beauty of finish unmarred by the presence of a single inside keyhole or exterior screw. Made of cold-rolled, electro-galvanized steel to last a lifetime, with rust-proofed metal trim of solid brass or solid bronze. No aggravating wobble in knobs or spindle. SCHLAGE Locks grip the door like the jaws of a vise. A snappy, elastic latch action is accelerated by compression springs throughout. Each lock a single, self-contained, factory-assembled unit all ready to slip into the door. Simply drill 2 holes. Installed in 1/3 the time required by old-fashioned mortise locks. Self-adjusting to door thickness. Reversible for right or left-hand doors. 12 types. All U. S. standard finishes. Choice of knobs. All Type A Locks interchangeable except AH. Master keyed and grand master keyed to suit. Over a million and a half in use. Durability, precision, and operation fully guaranteed. No building completely modern without them. Made by Schlage Lock Co., San Francisco, Calif. Branches in principal cities.



Type AK

Type AK SCHLAGE Key Lock

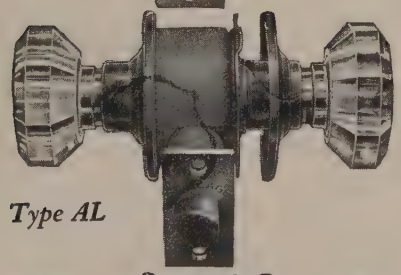
For doors 1-3/8" to 1-3/4" thick where lock will be operated from both sides. Locked from within by pressing button. Unlocked from within by turning knob, from without by key in outer knob. Backset 2-3/8". Master keyed in groups and series. Reversible for right or left-hand doors. All U. S. standard finishes. See knobs on next page. Complete with screws, plates, marker, and 3 keys in individual package.



Type AE

Type AKF SCHLAGE Fixed Key Lock

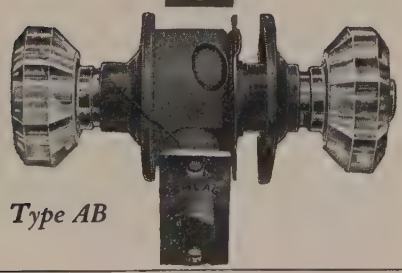
For corridor and other doors 1-3/8" to 1-3/4" thick, which are to be kept locked. Outer knob remains locked at all times. Unlocked from without by key in outer knob, from within by turning inner knob. Other features similar to Type AK.



Type AL

Type AE SCHLAGE Emergency Lock

For bathroom and similar doors 1-3/8" to 1-3/4" thick. Locked from within by pressing button in inner knob. Unlocked from within by turning inner knob, from without by emergency key provided with lock or by any blunt edged instrument. Other features similar to Type AK.



Type AB

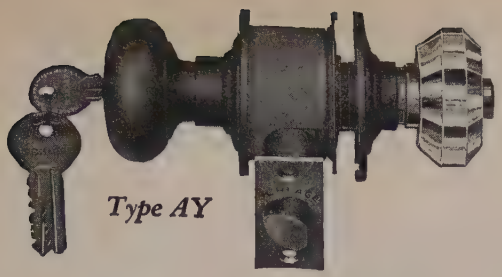
Type AL SCHLAGE Latch Lock

For all inside doors 1-3/8" to 1-3/4" thick which do not require locking. Neither knob can be locked. Other features similar to Type AK.

Type AB SCHLAGE Button Lock

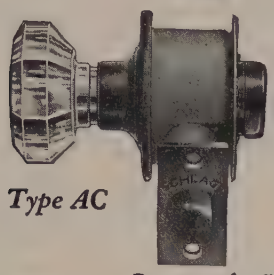
For bedroom and other interior doors 1-3/8" to 1-3/4" thick where no exterior key is required. Locked from within by pressing button in inner knob. Unlocked from within by turning inner knob. Other features similar to Type AK.

SCHLAGE LOCK CO., San Francisco, Calif. Branches in principal cities



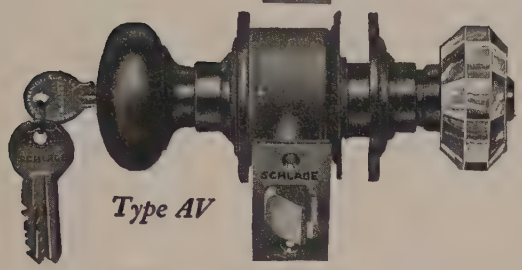
Type AY SCHLAGE Cylinder Lock

Fits all doors 1-3/8" to 1-3/4" thick. Cylinder set up for right or left-hand doors. Specify hand desired. Latchbolt reversible. Locked from within by pressing button in inner knob. Unlocked from within by turning inner kob, from without by key in outer knob. 5 pin tumbler brass cylinder. Key changes practically unlimited. Master keyed if desired. Other features similar to Type AK.



Type AC SCHLAGE Closet Lock

For closet and other doors 1-3/8 to 1-3/4" thick where outer knob and latch are desired but no inside knob is necessary. Cannot be locked. Other features similar to Type AK.



Type AV SCHLAGE Deadlocking Cylinder Lock

For corridor, exterior, and other doors 1-3/8" to 2-1/2" thick. Maximum protection in convenient and attractive form. Not reversible. Specify hand. Automatic dead latch is positive proof against intrusion. Beveled portion of latch enters strike plate. Action of auxiliary bolt deadlocks it in place until dead latch is retracted by turning knob or key. Locked by pressing button in inner knob. Unlocked by turning knob or using key in outer knob. Pin tumbler cylinder. 3 keys. Key changes practically unlimited. Master keyed if desired. Fits all doors 1-3/8" to 1-3/4" thick.

Type AVT SCHLAGE Turn Button Cylinder Lock

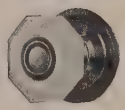
Similar to Type AV except that button can be stopped in locked position by giving it a quarter turn to right. Outer knob then remains locked until button is purposely released by quarter turn to left.

SCHLAGE Knob Designs

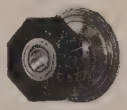
1 **Solid Wrought Brass or Bronze** in all U. S. standard finishes, with or without button, as shown on outside knobs of Type AK and AY.

2 **Octagonal Clear Glass** with polished nickel center. With or without button, as shown on Types AB and AL. Can be used anywhere except outside of Type AY.

3 **Octagonal Opal Knobs** with polished nickel center. With or without button, as shown on inside knob of Type AE. Can be used anywhere except outside of Type AY.



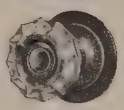
4 **Octagonal Colored Glass** with polished nickel knob center. Clear amber, green, or opaque glass in light blue and black. With or without button. Can be used anywhere except outside of Type AY.



5 M-1 **Fancy Metal Gothic.** Cast brass or bronze knob face, wrought solid brass or solid bronze knob shank. With or without button. Can be used anywhere except outside of Type AY.

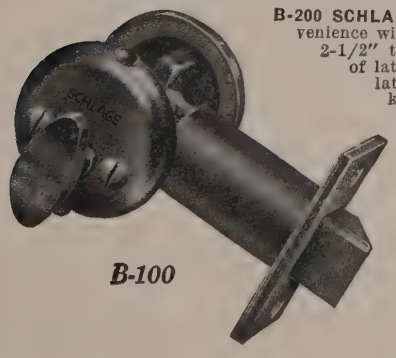
5 M-2 **Fancy Metal Colonial.** Cast brass or bronze knob face, wrought solid brass or solid bronze knob shank. With or without button. Can be used anywhere except outside of Type AY.

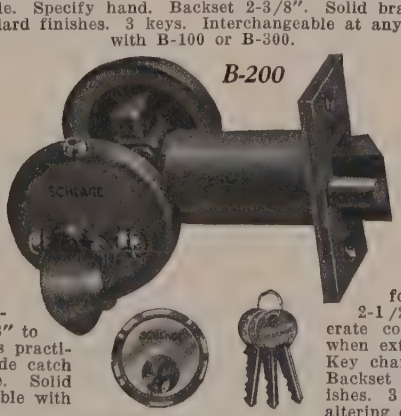
6 **Fluted Clear Glass.** 16-sided fluted shape, with polished nickel center. With or without button. Can be used anywhere except outside of Type AY.



7 **Hand-Hammered Brass or Bronze,** with or without button. Solid wrought brass or bronze knobs. Suitable for outside knob of AY Locks.

B-200 SCHLAGE AUTOMATIC DEAD LATCH. A new dead latch combining spring latch convenience with deadbolt security. For use on exterior, corridor, and other doors 1-3/8" to 2-1/2" thick. Maximum safety in convenient and attractive form. Beveled portion of latch enters strike plate. Action of auxiliary bolt deadlocks it in place until latch is retracted by turning key outside or thumb piece inside. Master keyed if desired. Handy slide catch for holding back latch. Not reversible. Specify hand. Backset 2-3/8". Solid brass trim. Standard finishes. 3 keys. Interchangeable at any time with B-100 or B-300.





B-100 SCHLAGE SPRING LATCH—A new Spring latch affording added security and unsurpassed convenience on attic, storeroom, and partition doors 1-3/8" to 2-1/2" thick. Working parts concealed. Key changes practically unlimited. Master keyed if desired. Handy slide catch for holding back latch. Backset 2-3/8". Reversible. Solid brass trim. Standard finishes. 3 keys. Interchangeable with B-200 and B-300 without altering door.

B-300 SCHLAGE DEADBOLT. An auxiliary lock for closet, cellar, garage, or back doors 1-3/8" to 2-1/2" thick. Maximum security in attractive form at moderate cost. Working parts concealed. Bolt deadlocks itself when extended by turning key outside or thumb piece inside. Key changes practically unlimited. Master keyed if desired. Backset 2-3/8". Reversible. Solid brass trim. Standard finishes. 3 keys. Interchangeable with B-100 or B-200 without altering door.

SCHLAGE LOCK CO., San Francisco, Calif. Branches in principal cities

If the door arrangement you desire is not shown on this page write for our complete catalog.

Garage Door Hardware

Made by ALLITH-PROUTY CO.

DANVILLE, ILLINOIS

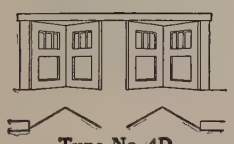
We make Right Angle and Round-a-Corner Door Hangers, Parallel, Folding Sliding Door Equipment and many other forms.

Type No. 3D

For the single car garage. It allows for two doors to fold to one side with passage door hinged to the opposite jamb.

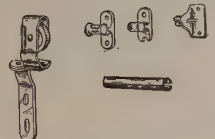
Type No. 3D-1

The same as the 3D type except that all three doors slide to one side and passage door locks against jamb.



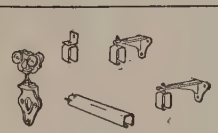
Type No. 4D

This type allows two doors to fold to each side. Separate passage door should be provided for.



No. 1180 Set

Round track equipment for light folding sliding doors. Steel swivel hanger with roller bearing machined cast wheel.



No. 1080 Set

Trolley track type of equipment for medium weight doors. Four wheel roller bearing truck, ball-bearing swivel, adjustable connection to door plate. Adjustable malleable track brackets.

Typical Installation of 3D Type

Products:

This company makes a complete line of Garage (or Barn) door equipment for swinging and sliding doors. Among unusual devices manufactured by this company are hardware for vertically sliding doors and an electrically operated garage door control with which the doors may be opened or closed by remote control.

Various Arrangement of Doors:

Where an opening is closed by two doors the simplest arrangement is the swing door set. Two types are made by this company; offset and reverse pad "T" hinges.

With three, four, five or six doors some form of sliding or folding-doors is required. The small sketches illustrate the different methods of taking care of these conditions.

Different Types of Equipment:

Local conditions and weight of doors will determine the kind of track to be used.

For use on the ordinary private garage, where the doors do not weigh over 150 lbs. each, our round track No. 1180 set gives splendid satisfaction.

The hanger with steel frame is of the swivel type, reversible and provided with vertical adjustment. The machined cast wheel 2½ inches in diameter, has hardened steel axle and lubricated roller bearings. The safety guard prevents derailment.

The track is a ⅞-inch tube made of heavy gauge high carbon steel with a slot in the back for insertion of the malleable brackets which are spaced to meet the requirements.

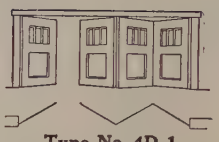
The elements of noise and friction are practically eliminated for the hanger wheel with its small point of contact on the tubular track travels with no side friction.

When the doors are subjected to harder service they should be equipped with our No. 1080 hardware. This is the trolley track type and affords the best method of supporting folding sliding doors.

The malleable brackets which support the track are adjustable so the doors may be opened at any angle.

The hangers have double adjustments, roller bearing wheels, ball bearing swivels, vertical side rollers that prevent any side friction in the track, and one piece certified malleable frame and apron.

The 1081 and 1082 outfits are similar in operation to the 1080 but are larger and heavier in construction.

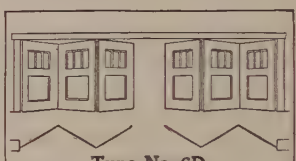


Type No. 4D-1

For four door openings and includes passage door. Three doors fold to one side, passage door hinged to the opposite jamb.

Type No. 5D

For wider openings. Two doors fold to one side and three to the other. Middle door serves as a passage door.

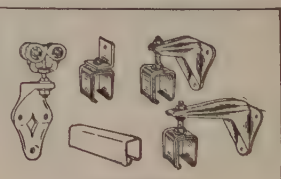


Type No. 6D

For two car garage—three doors fold each way. Either of the two middle doors may serve as passage door.

No. 1081 Set

A larger size similar to No. 1080 except for heavy doors. This will carry the heaviest doors on the private garage.



No. 1082 Set

The strongest equipment for folding sliding doors. Built for use on exceptionally large and heavy doors.

ALLITH-PROUTY CO., Danville, Illinois

If you have a special hardware application, you are invited to call upon our engineering department whose services are offered to you without obligation.

Garage Door Hardware

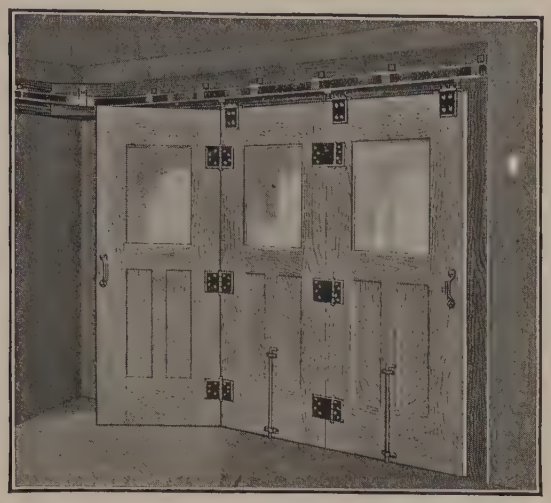
Made by ALLITH-PROUTY CO.

DANVILLE, ILLINOIS

In addition to the items shown, we make hardware for fire doors, warehouses, municipal buildings, airplane hangars and industrial uses.

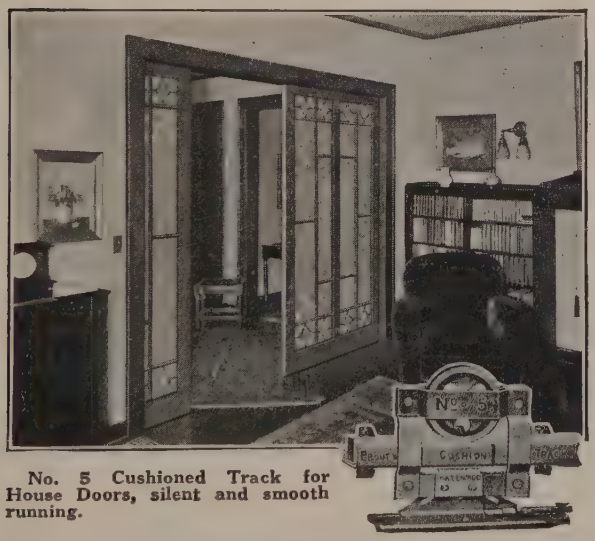
Around-the-Corner Hardware

For Doors That Slide Around-a-Corner



When space is a prime consideration we recommend our Round-A-Corner equipment. This method of installation provides a means of rolling the doors around the corner against the side wall and completely clears the opening. This hardware is furnished either with our round track or trolley track.

No. 5 Hangers for Disappearing Doors



No. 5 Cushioned Track for House Doors, silent and smooth running.

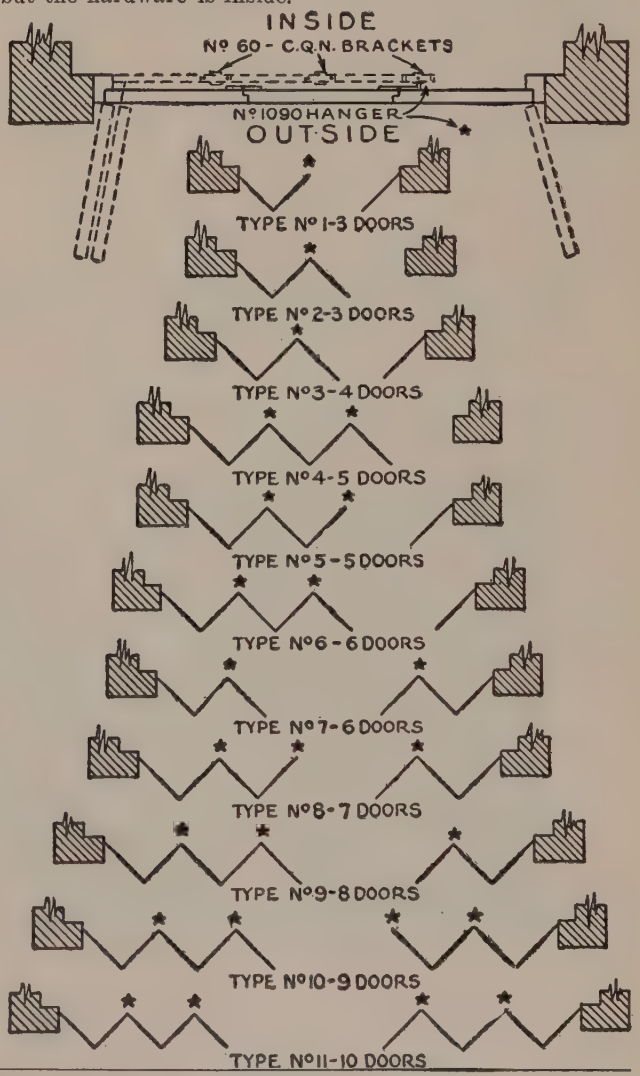
The No. 5 Hanger is designed to carry a door noiselessly, and no other outfit combines the desirable features embodied in it. The construction throughout prevents the loud rattling and rumbling characteristic of other styles, and guarantees durability and efficiency.

Cushion Track, the track is especially constructed for our No. 5 only. The hard maple rail is thoroughly kiln dried and mounted in a felt cushion, supported by a metal casing, which is made in one-foot sections, so that any vibrations which might penetrate the felt are confined to one piece of steel and are not distributed along the entire track.

Folding Sliding Hardware

No. 1090 saves space by folding the doors outside.

This hardware can be used for almost any number of doors and is made in three sizes. The plans below show the different types of application. The doors fold outward but the hardware is inside.



ALLITH-PROUTY CO., Danville, Illinois

McCABE DOOR HANGERS

Made by THE McCABE HANGER MFG. CO.

425-427 West 25th St., New York City

Products

This company makes Ball Bearing Door Hangers, Track and Hardware for all types of Sliding and Folding Doors, Overhead Carrying Devices, Expansion Bolts, Ball Bearing Wheels and Rolling Ladders. We have specialized in this line of work for 30 years and have developed hangers to meet every possible condition, many of them possessing unique and useful features not found in any other hanger. We are always glad to assist builders with advice based on our long experience. Put your sliding or folding door problems up to us and we will show you how to get the best results with least labor.

Sliding Doors For Homes

Below is illustrated the McCabe Double Sliding Door Equipment and method of installing. Similar equipment can be furnished for single doors. Note particularly the two adjustments, one raising and lowering the track and the other permitting the door itself to be raised or lowered. In designing this equipment careful attention has been paid to *accessibility*. You will find McCabe Hangers the easiest to install and easy to adjust, should settling of the building make adjustment necessary.

Best Materials Used

Our house door hanger is made of 13-gauge steel, the heaviest gauge used in any house door hanger. Carriages have steel frames and double ball-bearing wheels. All parts are case hardened and carriages are furnished with hard, fibre wheels, insuring long life and quiet operation. Header plates, door plates, stops and guides are of malleable steel. Tracks are self-clearing. Nothing better made, yet the price is but little more than the cheapest hanger on the market. Remember that your principal cost in door hanging is *labor* and do not economize on material. You save money on McCabe Hangers because they are designed and made to insure quick and satisfactory installation.

Accordion, or Folding, Door Hanger

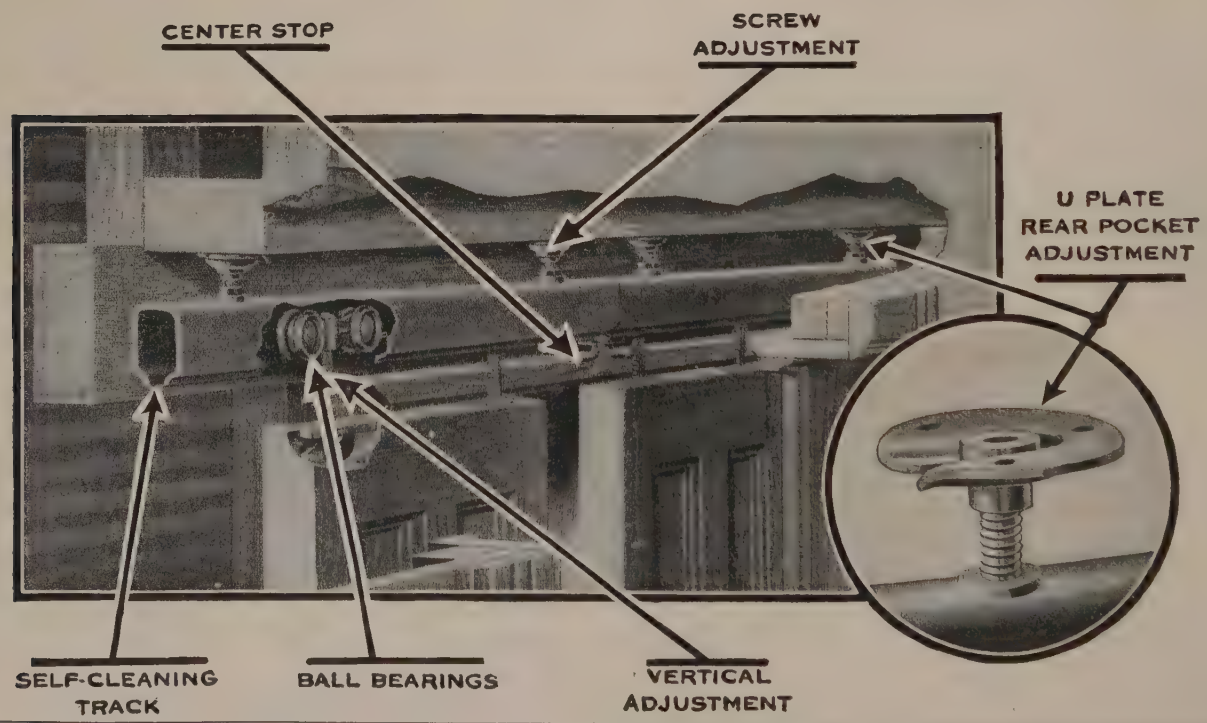
This equipment enables you to combine living room and dining room in one spacious room, yet provides for a folding partition between the two when desired. Gives your houses a unique feature that appeals to many home builders. Write for illustrated catalog and installation diagrams.

Receding Closet Door Hardware

This is another McCabe product that enables you to make your houses unique. Very useful, too, where space is limited. Closet door instead of swinging out, like a hinged door, slides back against side wall of closet. Opens and closes easily and when closed resembles an ordinary door. Write for full particulars. This is something you should know about.

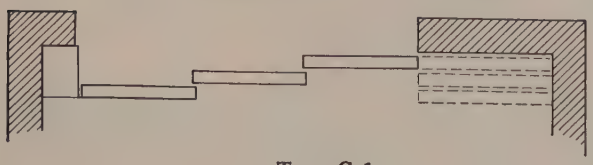
Garage Door Hangers

We make a complete line of Sliding Door Hangers for garage and barn doors, also equipment for combination slide-and-swing doors. Our catalog (No. 24) contains 16 diagrams showing various door arrangements and indicates the proper equipment for each. Doors may be arranged to slide in opposite directions, or all in the same directions. Hangers can be furnished for doors of any size and weight and for openings of any dimensions. On receipt of rough sketch showing size of opening and number of doors we will gladly indicate best arrangement.

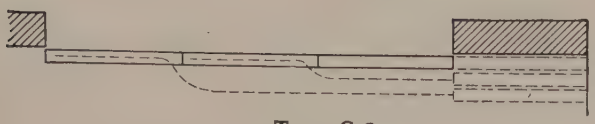


THE McCABE HANGER MFG. CO., 425-427 West 25th St., New York City

Diagrams Shown Below Indicate a Few of the Many Door Arrangements Possible With McCabe Garage Door Hangers

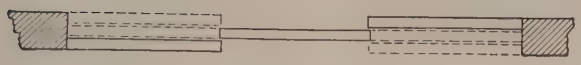


Type G-1

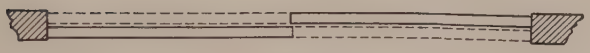


Type G-2

Type G-3



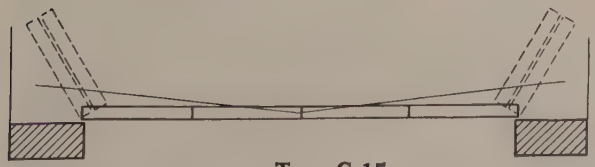
Type G-4



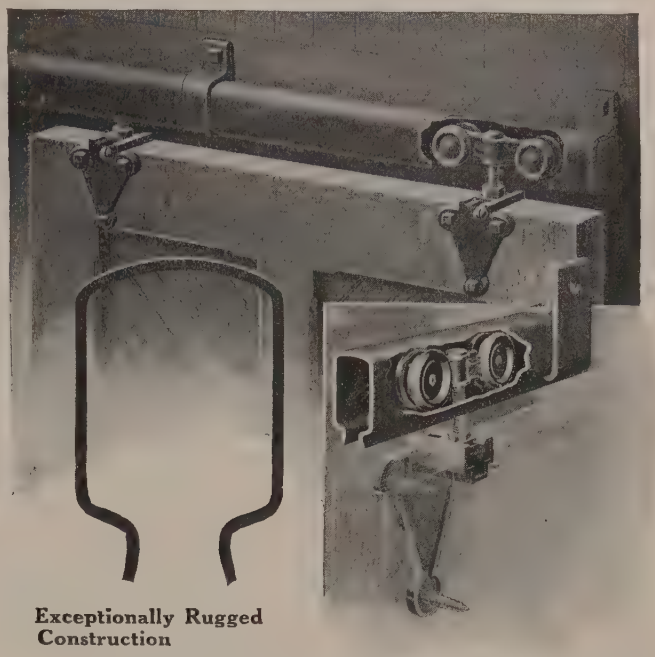
Type G-5

Type G-13

Type G-16



Type G-15



Exceptionally Rugged Construction

All parts included in the McCabe equipment for garage or barn doors are built to last. The SELF-CLEARING track is of heavy gauge steel, carriage frames are of pressed steel, or drop-forged case-hardened steel, wheels are of steel, perfectly true in form and mounted on ball-bearings. Two adjustments, lateral and vertical, enable doors to be fitted accurately to opening without loss of time.

Floor Guide and Weather Strip

The construction illustrated above seals the lower edge of the door against the weather and provides as well a ground guide that keeps doors in perfect alignment. Adds but little to the cost and gives your customer a job that he recognizes as being better than ordinary installations.

Overhead Carriers

If you build barns write for particulars on our Overhead Carriers.

THE McCABE HANGER MFG. CO., 425-427 West 25th St., New York City

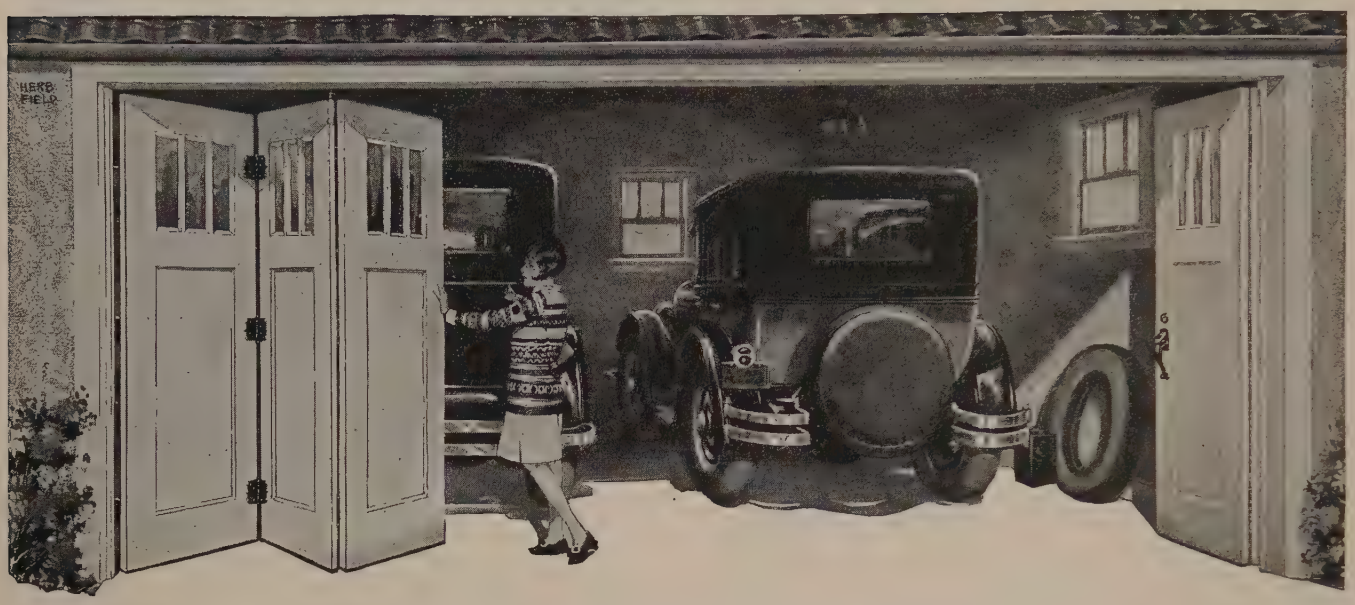
R-W GARAGE DOOR HARDWARE

Cable Address
"Richwilco Aurora"

Richards-Wilcox Mfg. Co.
"A Hanger for any Door that Slides."
AURORA, ILLINOIS, U.S.A.

Canadian Factory
London, Ontario

FOR BRANCH OFFICES SEE PAGE 143



Slide the doors *inside!*

You have no awkward, dangerous center posts with R-W garage door hardware. There's an R-W method to take care of any condition. The R-W line will solve every doorway problem for garage, home, school or any other use.

R-W "Slidetite" Sliding-Folding Garage Door Equipment (Illustrated above):

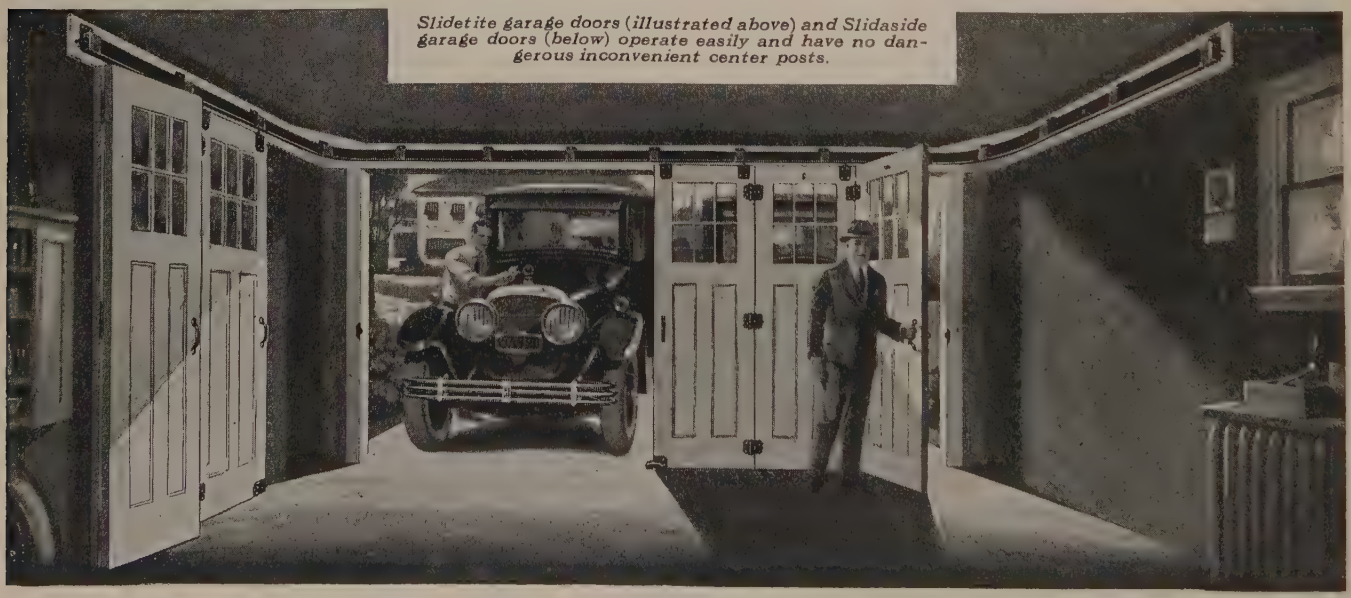
Combination hinged, folding and sliding type for openings from 8 to 30 feet wide. Doors are hinged at jamb on inside of building with one of each pair of doors supported at outer edge by roller bearing sliding door hangers.

"Slidetite" doors fit tight, are weather-proof, cannot sag or warp. All of the openings may be used at one time.

Styles:

"Slidetite" outfits are made in two styles—No. 435 and No. 1035; the designating numbers referring to the style number of hinge used, the No. 435 hinge being a half surface hinge or butt while No. 1035 is an offset strap hinge.

No. 435 hardware for light doors is furnished with a half-surface hinge which throws 2 doors on each side of the opening clear of the jamb. Heavier No. 435 Hardware is furnished with butts which cause the doors, when standing at right angles to the opening, to project into the opening. With the No. 1035 hinge, the doors swing clear of the opening. Send for complete illustrated catalog.



Slidetite garage doors (illustrated above) and Slidaside garage doors (below) operate easily and have no dangerous inconvenient center posts.

for the house!

Thickness of Doors:

For private garages, doors 1¾" thick should give satisfactory service. For public garage doors, subject to hard usage, doors 2¼" thick should be used. Hardware is made to handle doors up to 2½" thick.

Equipment:

All necessary hardware is furnished with each "Slidetite" outfit, including: track, hangers, brackets, hinges, bow handles, top and bottom bolts and all screws and bolts necessary to erect. Lock for entrance door not furnished with sets, but should be specified separately.

Intermediate and end brackets are adjustable. Hangers have metal wheels, vertical adjustment and ball-bearing swivel pendants.

Top and bottom Cremone bolts are required to lock the doors in place. Floor guides are furnished where necessary and two bumper shoes are attached to lower corner of door to prevent chafing by guide.

Locking:

If no separate entrance door is available (1) hang the doors so one door near the center of the opening will be hinged free to serve as passage door, or (2) specify No. 1125 outside lock with No. 617 Cremone bolt inside.

Special Features:

In the winter time when snow and ice is liable to pile up against the outside of the garage doors, it is unnecessary to dig your way into the garage, as Slidetite doors open inside. The hinges used at the jamb are provided with an offset which throws the doors in back of the jamb and give a clear opening from jamb to jamb.

Service:

If you have any special problems in regard to hanging garage doors, R-W engineers will be glad to suggest to you the proper equipment to handle any doors.

R-W "Slidaside" Garage Door Equipment (Bottom preceding page):

For three doors hinged together. The door nearest the side of the building toward which the doors slide when opening is used as an entrance door. The doors may be mounted to slide to the right or to the left, or both ways for two car garages requiring six doors. The hardware is reversible and can be used in any opening regardless of the distance from the jamb to the side wall.

Special Features:

The entrance door swings free and is folded back before the doors are operated around the curved section of the track. In this way, but little space is required between the doorway and the back end of the car when it stands in the garage. When in open position, the doors lie flat against the side wall of the garage.

Service:

Detailed information regarding Slidetite and Slidaside garage door hardware is contained in our special catalog "Distinctive Garage Door Equipment," copy of which will be sent upon request.

Save Space with R-W Vanishing House Door Hardware

The above illustration shows vanishing doors which operate upon R-W hangers and track. The utility and ornamental possibilities of having these doors vanish into the wall instead of swinging into the room are obvious. The doors interfere in no way with draperies, furniture or fixtures of the home, and they do not require the floor space needed for swinging hinged doors.

The wide opening between two rooms, which can be completely closed when desired, gives an effect of spaciousness which is most pleasing.

The use of vanishing doors is now becoming more general than ever before. Space is one of the most desired features in the bungalow, apartment or house and architects are taking advantage of the space saving features, which vanishing doors permit, and are specifying them in their plans.

The R-W catalog is complete. It illustrates and describes all types of door hardware for the home, garage and public buildings. Send for the catalog. Keep it in your files for ready reference.

STANLEY HARDWARE

New York:
100 Lafayette St.
San Francisco, Cal.
Los Angeles, Cal.

Made by THE STANLEY WORKS
New Britain, Conn.

Chicago:
61-67 W. Kinzie St.
Seattle, Wash.

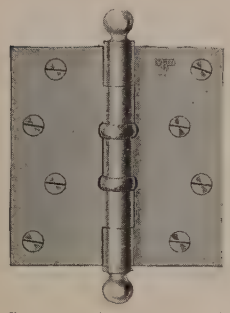
STANLEY
S.W.

Products:

Wrought Steel and Bronze Hardware, including Ball Bearing Butts and Hinges, Latches, Handles, Bolts, Storm Sash Hardware, Screen Hardware and Blind Hardware. The Stanley Works have been manufacturing high grade hardware for over 80 years. All Stanley wrought steel products are manufactured from cold rolled steel from their own steel mills. Uniform quality is assured.

Stanley products can be furnished in any finish to match other hardware used, and can be obtained from any builders' hardware dealer.

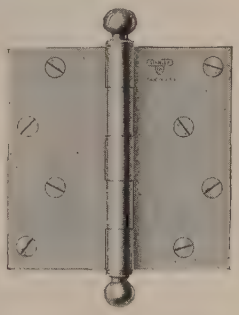
For Garage Hardware see opposite page.



Stanley Wrought Steel Ball Bearing Butts No. BB239

Recommended for use in the finest houses. Equipped with Stanley Ball Bearing Washers to insure ease of operation. Non-rising, self-lubricating loose pins. Inner edges of leaves beveled. Highly polished and heavily plated. Furnished in all standard finishes.

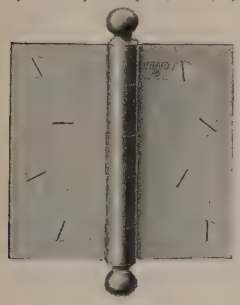
Sizes, inches, 2½x2½, 3x3, 3½x3½, 4x4, 4½x4½, 5x5, 6x6.



Stanley Wrought Steel Butts No. 239

Adapted for fine work. Inner edges of leaves are beveled. Loose Pin is non-rising and self-lubricating. Highly polished and heavily plated. Furnished in all standard finishes.

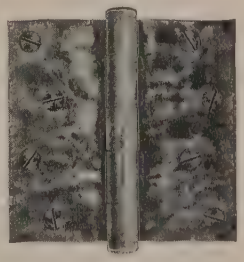
Sizes, inches, 2x2, 2½x2½, 3x3, 3½x3½, 4x4, 4½x4½, 5x5, 6x6.



Stanley Wrought Steel Butts No. 241½

A finely polished and plated butt recommended for general use. Loose pin is non-rising. Furnished in all standard finishes.

3½x3½, 4x4, 4½x4½, 5x5 and 6x6.



Stanley Wrought Steel Butts No. K 246 WR

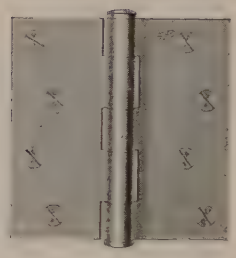
Designed for use on doors of residences. Wrought iron finish will match early wrought iron hardware. Can be furnished with iron or brass steeple tips.

Sizes, inches, 3x3, 3½x3½, 4x4, 4½x4½, 5x5.

Stanley Wrought Steel Light Loose Pin Butts No. 289

Planished and Plated. Recommended for use on light weight doors such as china closets, cabinets, cupboards, etc.

Furnished in all standard finishes. Sizes: Inches, 2x2, 2½x2, 2½x2½, 3x2½, 3x3.



Stanley Wrought Steel Butts Designed for Painting No. 235

Extra clearance is provided between knuckles and edges of the leaves to prevent marring the paint when the door is operated.

Loose pin is non-rising.

Supplied with flat button tips but ball tips can be furnished if desired.

Provided with a priming coat to serve as a base for painting.

Size: Inches, 3x3, 3½x3½, 4x4, 4½x4½, 5x5, 6x6.

Stanley Wrought Steel Surface Bolts No. 381 and No. 379

Strong bolts used to fasten the top and bottom of double doors and windows.

No. 381 ½ in. half round rods. Sizes 4, 6, 9, 12 and 18 in. lengths. 1¼ inch throw.

No. 379 ⅜ in. half-round rods. Sizes 3, 4, 6 and 9 in. lengths. 3 in. size has ⅝ in. throw. 4, 6 and 9 in. sizes have 1 inch throw.

Furnished in all standard finishes.

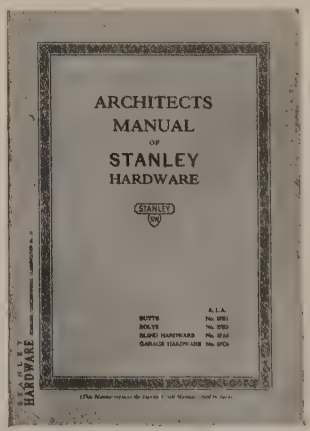
Stanley Wrought Steel Door Holders No. 456

Can be used on doors of any weight. Especially recommended for doors equipped with door checks, single or double acting spring hinges.

Equipped with composition rubber tip, self adjusting to unevenness of the floor.

Slight pressure on trip lever releases the holder.

Plates are 5x2 in., diam. of bolt ¾ in. Throw 1¼ in. Furnished in all standard finishes.



THE SELECTION OF CORRECT HARDWARE MADE EASY!

This Manual of 125 pages, fully illustrated, will be sent to Building Contractors on request, free of charge.

The Stanley Architects Manual gives standard specifications and detail drawings for the selection and installation of Stanley hardware. With this useful book it will be easy to choose and specify hardware of the correct weight and finish for every need.

THE STANLEY WORKS, New Britain, Conn.

STANLEY GARAGE DOOR HARDWARE

New York:
100 Lafayette St.
San Francisco, Cal.
Los Angeles, Cal.

Made by THE STANLEY WORKS
NEW BRITAIN, CONN.

Chicago:
61-67 W. Kinzie St.
Seattle, Wash.

Products:
Garage Door Hardware Sets, including Hinges, Bolts, Latches, Handles and Door Holders.
For Builders' Hardware see opposite page.

Design:
The Stanley Works were the original manufacturers of hardware especially designed for Garage Doors.

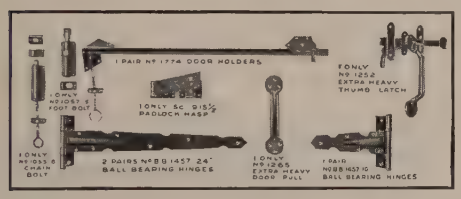
Ball Bearing Hinges were designed to eliminate wear on the joint of the hinge and to insure ease of operation.

Garage Sets:
Stanley Garage Hardware is regularly packed in complete sets to meet the requirements of various types of garage doors. They are packed complete with screws and bolts.

Stanley Garage Hardware Set No. 1785

Two pairs of 24 inch and one pair of 10 inch Ball Bearing Hinges make this a very attractive and serviceable set for a well designed garage.

Articles comprising Set No. 1785

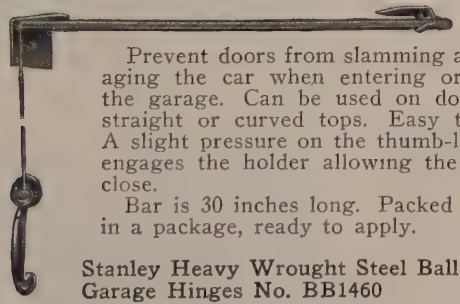

1 PAIR Nº 1774 DOOR HOLDERS
1 ONLY Nº 1252 EXTRA HEAVY THUMB LATCH
1 ONLY 5C 9152/3 PADLOCK HASP
1 ONLY Nº 1035 CHAIN BOLT
2 PAIRS Nº BB 1457 24" BALL BEARING HINGES
1 ONLY Nº 1265 EXTRA HEAVY DOOR PULL
1 PAIR Nº BB 1457-10 BALL BEARING HINGES

No. 1053 Bolt Showing Bolt When Open

Stanley Extra Heavy Wrought Steel Bolt Espagnolette Type—No. 1053

For garage doors opening in or out. Made for doors 8 ft. high with 3″ adjustments in either direction—special sizes to order. Made of cold rolled steel, handle bronze plated. Applies considerable leverage at top and bottom and will draw door into place even when warped.

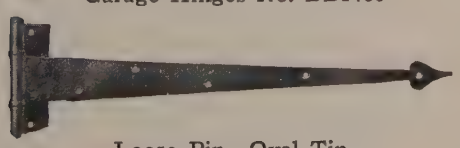
Stanley Wrought Steel Garage Door Holders No. 1770



Prevent doors from slamming and damaging the car when entering or leaving the garage. Can be used on doors with straight or curved tops. Easy to apply. A slight pressure on the thumb-latch disengages the holder allowing the door to close.

Bar is 30 inches long. Packed one pair in a package, ready to apply.

Stanley Heavy Wrought Steel Ball Bearing Garage Hinges No. BB1460



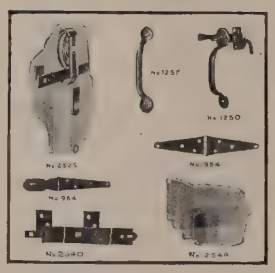
Loose Pin—Oval Tip

Made of extra heavy wrought steel toughened and hardened by cold rolling. Reversible, can be applied as a full surface or half surface hinge. Made in three sizes, 18 in., 24 in., and 32 in. (Length of door leaf.)

Stanley Garage Hardware Set for Rolling Doors No. 2505

The hardware in the set can be arranged to make three combinations of doors. Requires little floor space.

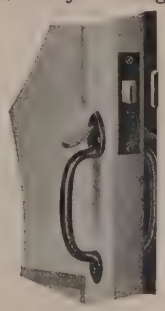
Articles comprising Set No. 2505



Stanley Wrought Steel "Kee Bolt"
No. 1000 without cylinder
No. 1005 with cylinder

Operates in a threefold capacity—a bolt, a latch and a lock. Pressure on the thumb-piece releases door after slight turn of the key.

Stanley Wrought Steel Mortise Thumb Latch—No. 1289



Designed for garage doors that are not rabbeted. Made for doors 1⅝″ to 3″ in thickness. All parts unusually large and strong. Latchbolt drop forged and cold galvanized. Spring of hard phosphor bronze. Latch and handles of wrought steel.

Specify thickness of door.

THE STANLEY WORKS, New Britain, Conn.

One Hand Operates Both Doors Which Are Held Rigid Open or Closed—Prevents Danger of Monoxide Poisoning

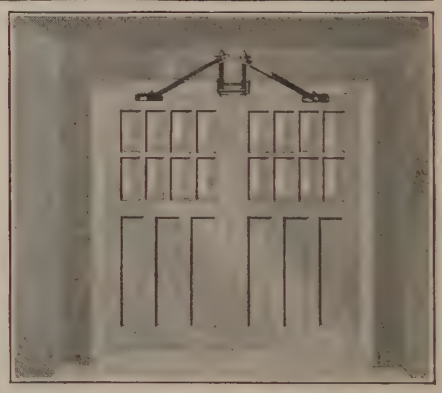
9 REASONS WHY IT IS SUPERIOR

1. Slight pull on one door causes both doors to spring open as one.
2. Holds both doors open or shut in all winds without use of any catch.
3. Comes completely assembled.
4. Anyone knowing how to use a hammer and wrench can install Sta-Put in less than thirty minutes.
5. Has unusual adjustment features.
6. Nothing to get out of order.
7. Does away with the necessity for expensive doors such as overhead and rollaway types.
8. Elimates danger of death by monixide gas poisoning.
9. Pays for itself many times over in preventing damage to car and broken doors, time, temper and inconvenience.

Dealers, builders and contractors everywhere who have seen STA-PUT pronounce it the most efficient, most reliable type of garage door control ever brought out. The ease with which it is installed and the simplicity with which it operates appeal to all owners of private garages. How STA-PUT holds doors open or shut in strongest wind—how it prevents slamming; eliminates damage to doors or car; and stops the need of hooks and props to hold doors—is a revelation to everybody who knows the growing need for a really efficient garage door control. The verdict is universal. STA-PUT meets every requirement. Weighs 21 lbs.

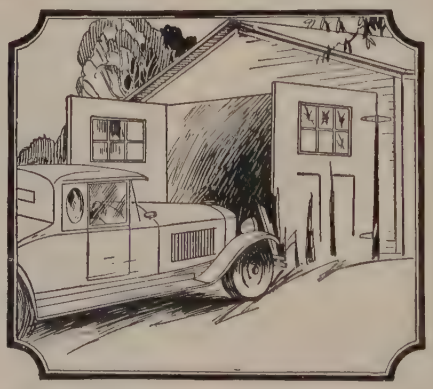
DR. A. H. KEGEL
Chicago Health Commissioner—Says:

"Deaths from carbon monoxide have averaged one a week. The blue smoke from motor vehicle engines in *closed garages* takes a steady toll of lives and garage doors should always be open while motor is running." Many of these deaths are due to the doors accidentally blowing shut. Sta-Put positively ends this danger.



Interior view showing how STA-PUT control is out of the way when doors are closed.

Just the slight touch of one hand on one door operates both doors for both closing or opening.



STA-PUT prevents doors blowing shut and causing damage to door and car.

Showing STA-PUT control in position when doors are open.

DOOR OPERATORS CORP., Dept. H3, 1217-1219 W. Monroe St., Chicago, Ill.

ACCO No. 8 Sash Chain

Include ACCO No. 8 Sash Chain in your hardware specifications. It costs no more per window—100 feet of ACCO Sash Chain will hang *seven* average windows as against only *five* with cord. There are no knots to tie—this saves material and makes a more workmanlike job.

Carpenters can hang four windows with ACCO Sash Chain in the time it takes to hang three with cord. A saving in labor that mounts up when you are figuring close.

Stronger—neater—more satisfactory

Architects recommend ACCO Sash Chain because it wears a lifetime. It cannot fray, weaken or stretch. It is required by insurance underwriters in all fireproof buildings because it will not burn and allow windows to drop.

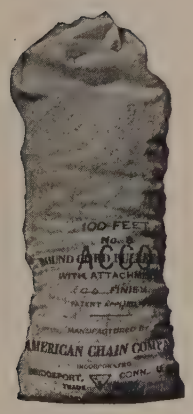
Operates perfectly over any cord pulley

No change is required in the window construction, to install ACCO No. 8 Sash Chain. ACCO No. 8 Sash Chain is designed to operate freely over any cord pulley.

—made of copper-bearing steel

ACCO No. 8 Sash Chain is made of *copper-bearing* steel, the best material yet found for sash chain use. Three finishes are available: Coppered, which has a rich bronze appearance; S.R.P. (special rust proof), a dull gray; or Hot Galvanized.

Good hardware dealers carry ACCO No. 8 Sash Chain in 100 feet packages including the attachments.



Easy to Install
For one-hole sash, a coil spring provides a strong grip which cannot tear loose. The coil is slipped onto the end link and inserted in hole in sash.
For two-hole sash, the coil is inserted in the upper hole of sash. One attachment takes care of both one and two-hole sash construction.
ACCO
AMERICAN CHAIN COMPANY Inc.
in business for Your Safety

AMERICAN CHAIN COMPANY, INC.
Bridgeport, Connecticut

In Canada: Dominion Chain Company, Limited, Niagara Falls, Ontario

District Sales Offices: Boston Chicago New York Philadelphia Pittsburgh San Francisco

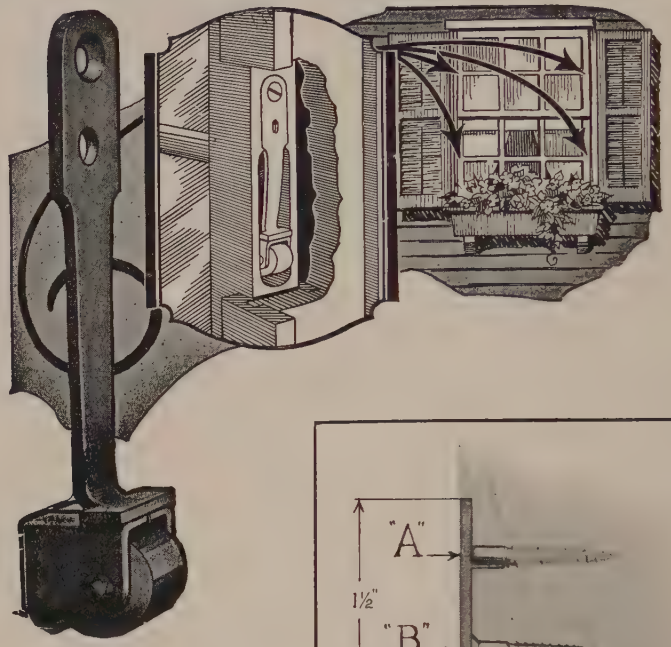
SASH SUSTAINERS

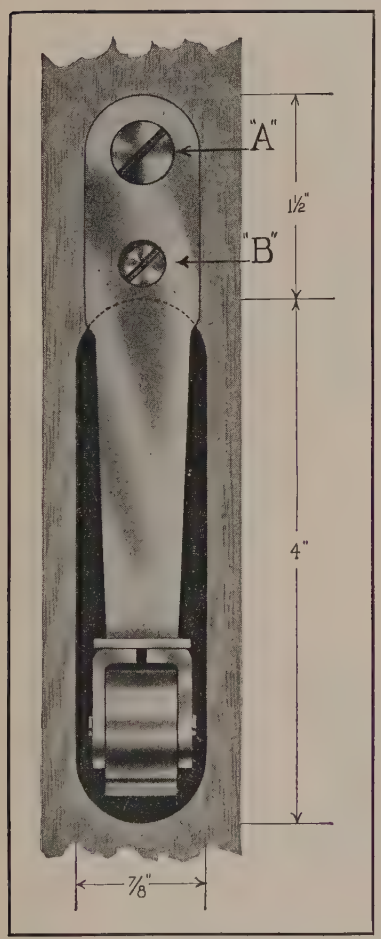
Made by AUSTRAL WINDOW COMPANY

101 Park Avenue, New York, N. Y.

Less Cost
Less Trouble

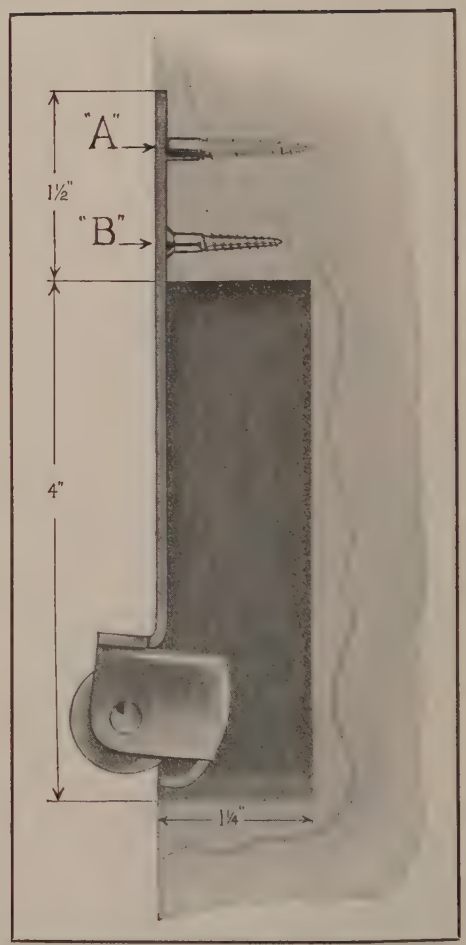
No more - - - - -
Weights
Pulleys
Broken Cords
Spring Bolts





Showing mortise cut in edge of sash with *Sash Sustainer* in position.

Side rail of sash broken away to show mortise and position of *Sash Sustainer*.



Plan Easy Working Windows *in* Homes You Build

Builders appreciate Austral superior qualities. Over 30,000 sample Austral Sash Sustainers are in the hands of builders now. Let us send you your sample set. Examine them yourself.

The Austral Sash Sustainer eliminates the use of weights, pulleys, cords and weight boxes. Cost is from one-half to two-thirds that of the double-hung window equipment. Requires only half the labor for application and weighs but a fraction of the cumbersome equipment.

Your mills can furnish you plank frames with sash mortised for *Austral Sash Sustainer*.

AUSTRAL WINDOW CO., Architects' Bldg., 101 Park Ave., New York, N. Y.

SAMSON SPOT SASH CORD

Made by SAMSON CORDAGE WORKS

89 Broad St., Boston, Mass.

PRODUCTS

The Samson Cordage Works are manufacturers of braided cord in all sizes and colors for all purposes, including Samson Spot Sash Cord and other Sash Cords, Clothes Line, Awning Line, Ventilator Cord, Curtain and Shade Cord, Masons' Line, Arc Lamp and Trolley Cord, Signal Cord, Dumbwaiter Rope, etc.; also Glazed Cotton Twine.

Samson Trade Mark

TRADE MARKS

All cord bearing the trade mark of Samson and the Lion is made of extra quality stock, is carefully inspected and guaranteed free from imperfections of braid or finish. In addition to this trade mark on the labels on each hank, Samson Spot Cord is marked with colored spots which are a means of identification after the labels are removed and prevent the substitution of inferior cord.

SAMSON SPOT SASH CORD

Samson Spot Cord will wear many times longer than metal devices or than the common cord so often found on the market, made of inferior yarn, roughly braided and poorly finished, and often adulterated. Such cord is soon destroyed by abrasion on the pulley. Spot Cord, when used with the pulleys and weights recommended, will wear at least 25 years. The difference in cost between Spot Cord and ordinary rough cord for a whole house is frequently less than the expense of replacing a single broken cord.

SPECIFICATIONS

Specifications should read: "Windows to be hung with Samson Spot Cord; size of cord and size of pulleys to agree with manufacturer's list." (See illustrations at bottom of page.)

SAMPLE CARDS AND CATALOGUES

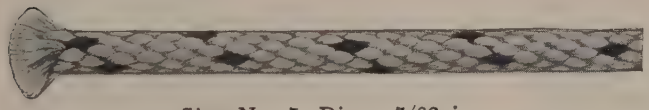
Sample cards and catalogues showing the proper sizes with different weights and pulleys and further information will be gladly sent to architects, builders, or anyone interested.

SAMSON SPOT CORD

The number indicates the diameter in 32ds of an inch.

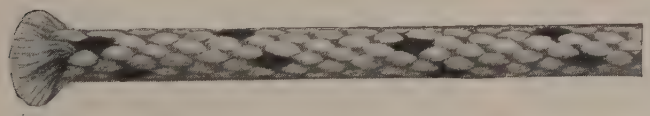
Size No. 6. Diam. 3/16 in.

About 18 lbs. per doz.; about 66 ft. per lb. Suitable for weights of less than 5 lbs. Minimum diam. of pulley allowable 1½ in.



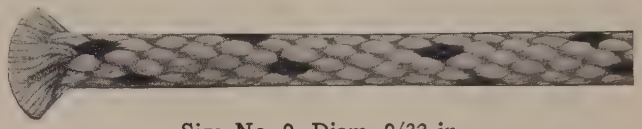
Size No. 7. Diam. 7/32 in.

About 22 lbs. per doz.; about 55 ft. per lb. Suitable for weights from 5 to 12 lbs. Minimum diam. of pulley allowable 1¾ in.



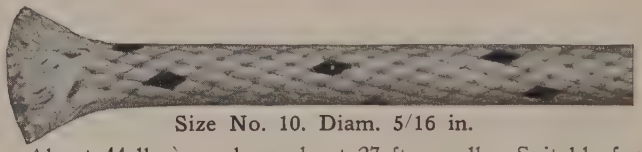
Size No. 8. Diam. ¼ in.

About 27 lbs. per doz.; about 44 ft. per lb. Suitable for weights from 12 to 20 lbs. Minimum diam. of pulley allowable 2 in.



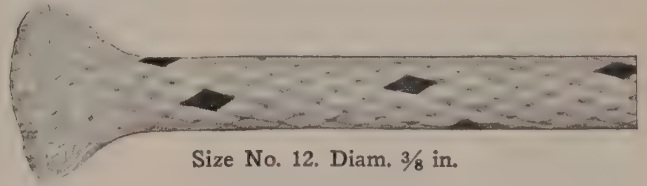
Size No. 9. Diam. 9/32 in.

About 33 lbs. per doz.; about 36 ft. per lb. Suitable for weights from 20 to 30 lbs. Minimum diam. of pulley allowable 2¼ in.



Size No. 10. Diam. 5/16 in.

About 44 lbs. per doz.; about 27 ft. per lb. Suitable for weights from 30 to 40 lbs. Minimum diam. of pulley allowable 2½ in.



Size No. 12. Diam. ⅜ in.

About 60 lbs. per doz.; about 20 ft. per lb. Suitable for weights from 40 to 50 lbs. Minimum diam. of pulley allowable 3 in.

HANK SAMSON SPOT CORD

SAMSON CORDAGE WORKS, Boston, Mass.

RECEIVADOR SALES CO.

GRAND RAPIDS, MICH.

CHICAGO OFFICE: 6302 Winthrop Avenue—Telephone, Sheldrake 2421

The Receivador

Specified by architects and used by builders for over ten years.

"The Automatic Servant"
TRADE MARK

What It Is—The Receivador is a package receiver for use in apartment buildings and private residences. It generally consists of two compartments to accommodate two separate deliveries before being emptied. Its purpose is to receive and safeguard delivered packages and parcels during the absence or preoccupation of the housekeeper, or until removed at her leisure. The general construction and the sturdy special locks guard against entrance to the home with equal security as the door itself. Safety to the articles delivered and safety to the home itself are the paramount features around which the Receivador is constructed.

How It Is Made—The Receivador is made entirely of high grade smooth furniture steel, with all parts electrically welded into a neat compact and strong unit of light weight and steel furniture quality. Each compartment has two doors, one opening from the outside, the other from the inside of the home. The doors are of double steel-wall construction with a substantial filler of insulating material between the two sheets of steel. Each door has a substantial "dead bolt" lock, operated by solid brass thumbpieces (no keys). The master stroke of the Receivador is in its interlock, which is the brain that makes its operation entirely automatic, foolproof, and thiefproof. The interlock is attached inside of the compartment and controls the operation of the locks on the doors.

All hardware exposed to wear is solid brass. All locks are of high grade sheet steel and protected against rust by Cadmium plating. Receivador cabinets are exactly the same on both sides, so that either side may be the outside, thus permitting installation for either right or left-hand swings.

How It Works—The operation of the Receivador is simplicity itself. The delivery man merely unlocks the compartment door from the outside by turning the thumbpiece, places his delivery in the compartment and again locks the door by turning the thumbpiece. The delivered articles have now been automatically locked in, because the interlock has taken engagement with the outside lock, and the lock cannot again be opened. The housewife, at her leisure, opens the inside door, removes the delivered articles and again locks the door. This automatically releases the interlock, and the outside door may again be unlocked to make another delivery. Both doors of a compartment are normally locked, one being locked so that it cannot be opened, and the other being locked so it can be opened, according as to whether a compartment is filled or empty.

Neat and simple operating directions are provided on both sides of Receivadors. There are no keys or other loose parts to become lost.

How It Is Finished—The standard finish for Receivadors is non-rusting, baked olive green enamel. This color is in harmony with any color scheme, but Receivadors may be painted over to match decorations. We also furnish Receivadors in the most perfect imitation of natural wood finishes at slight extra cost.

Where It Is Used—In private homes, the Receivador may be installed either in the rear service door, or in the adjacent wall. In apartment buildings, the Receivador is installed in the service door of the apartment, or into the wall leading to the kitchen. In single entrance apartments, where no wall space is available or convenient, Receivadors are installed in the main entrance doors.

Standard Receivador
For installation in doors or walls of apartments and private residences

Articles Are Delivered Through Outside Door and Safeguarded Until Removed Through Inside Door

RECEIVADOR SALES CO., Grand Rapids, MICH.

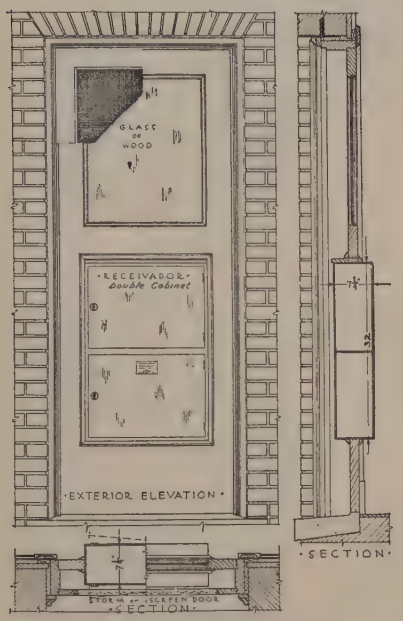
Receivadors are not objectionable in doors, and do not restrict in any manner the normal use of the door. The overall depth of the Receivador is the same as that of standard doorknobs, therefore where a doorknob can be used, the Receivador can be used, with the same everyday utility and the same absence of objectionable features.

How It Is Installed—Where Receivadors are installed in doors, the mill making the doors should furnish and install the Receivadors, as this will assure a workmanlike job. Receivadors are provided with holes for fastening with screws. The suggested details shown are good practices to follow for all exposed installations. For inside installations, the drip cap should be omitted. Where Receivadors are installed in walls, include them with the carpenter specification. Rough openings with standard frames should be left when walls are erected and Receivadors installed when carpenters erect other trim.

Key-locked Receivadors—For apartment buildings where tradesmen are not permitted to deliver directly to tenants, we furnish Receivadors with masterkey locks. Service man then makes deliveries "en masse" at regular appointed times.

Prices and Guarantee—Receivadors are made in a range of quality, size and price, to fit the situation from the humble bungalow to the great mansion, and from the single room apartment to those occupying an entire floor. Prices range from $7.50 per compartment up. The cheapest kind of wood milk bottle box, with hardware, painting and installation will cost as much, and be a very poor substitute when finished. The Receivador is made by specialists in a most modern factory. Its 16 years of country-wide use has made it the standard article with architects. Receivadors are unconditionally guaranteed for one year from date of delivery.

Architect's Portfolio—Please write for one. This gives full details and prominent users.



Double Receivador Cabinet Installed in Wood Door

Receivador cabinets do not interfere with storm or screen doors

Receivador Junior

DIMENSIONS

Double Compartment Units, In.		Single Compartment Units, In.		Size Door,
Width	Height	Width	Height	Ft. In.
20	32	20	16	2 6
22	32	22	16	2 8
24	32	24	16	2 10
26	32	26	16	3 0

All cabinets are 6¼ in. deep inside, and 7¼ in. over all. Sizes listed are standard and carried in stock. Special sizes and compartment arrangements can be furnished for the larger operations.

Sample Specification

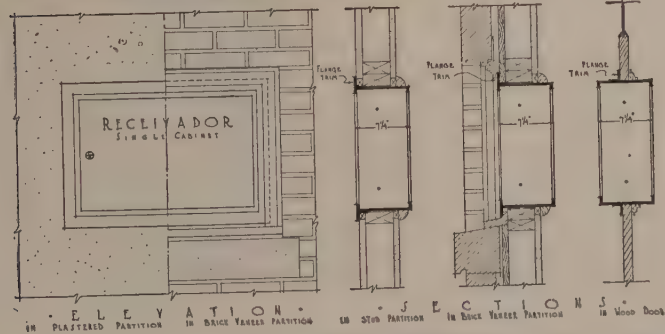
Receivador—Furnish and install complete and finish according to architect's specifications—double Steel Receivadors, manufactured by the Receivador Sales Co., Grand Rapids, Mich., as shown on the plans. Where Receivadors are to be installed in doors, the doors must be furnished by the contractor with the proper opening for the Receivador Cabinets. For door installations, stiles must be 5 in. wide.

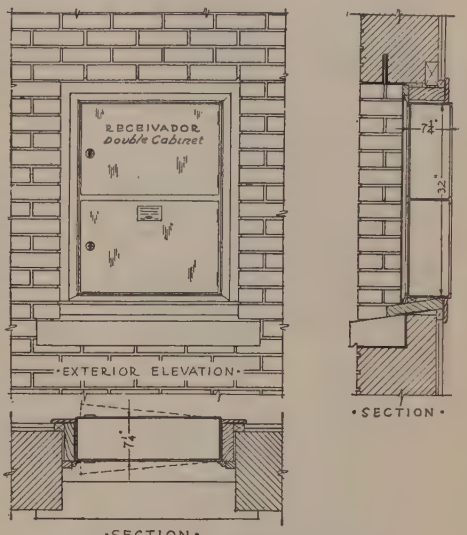
Where Receivadors are to be installed in walls, frames and trim must be furnished by the contractor. For wall installations allow ¼ to ½ in. clearance in rough framed openings.

Receivador Junior

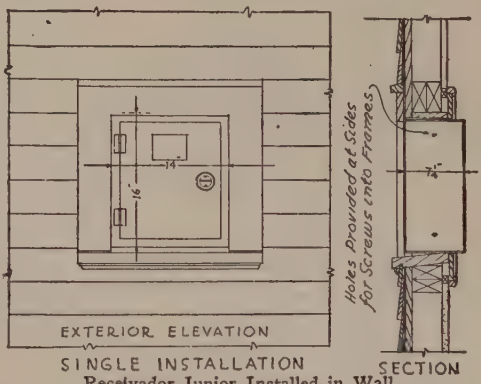
Designed especially for moderate priced homes and apartments for receiving milk and small packages. Same welded construction and materials as the standard type and with the same automatic, non-pickable locks. Cheaper, better and more sanitary than wood boxes—weatherproof and verminproof.

Sizes—Single compartment, 14 in. wide, 16 in. high; double compartment, 14 in. wide, 32 in. high; all compartments, 7¼ in. deep over all. The Junior fits between studding 16 in. on centers.





Double Receivador Cabinet in Wall of Brick Building



Receivador Junior Installed in Wall

Flange Trim for Receivadors

Flange trim consists of furniture steel frame, electrically welded to the Receivador. It may be located near the center for installation into doors, or flush with the face for wall installations.

Flange trim can be applied to all types and sizes of Receivadors. It saves its small additional cost many times over, by eliminating labor and materials for ordinary wood casings, and assures a neat weatherproof job.

When ordering Receivadors with flange trim, the location of the flange should be given and also the swing as referring to the location of the hinges on the outside of the apartment or residence.

RECEIVADOR SALES CO., Grand Rapids, MICH.

WEATHER-PROOF

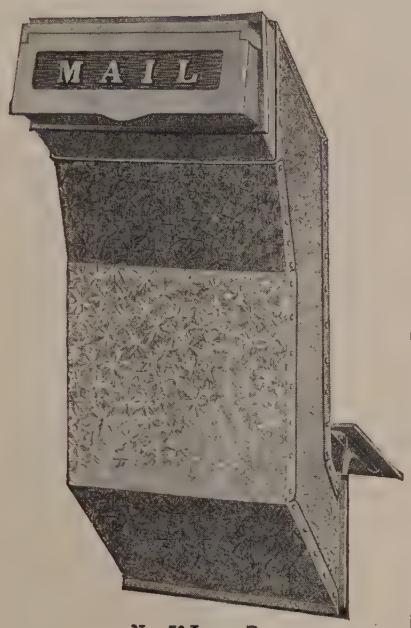
KOLSTAD MAIL BOX CO.

MFGRS., OF APARTMENT, RESIDENCE AND RURAL MAIL BOXES.

TROUBLE-PROOF

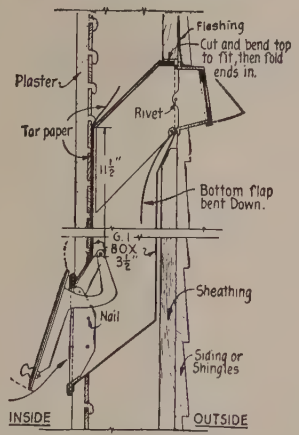
DULUTH, MINN.

BOXES

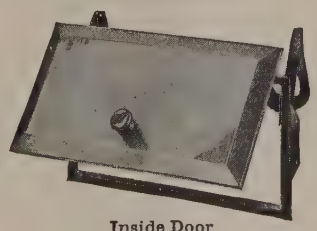


No. 50 Large Box (For Frame Wall)

No. 58 Style of Front for Brick Wall Boxes



Box in Frame Wall



Inside Door (For All Boxes and Chutes)

Kolstad Mail Receptacles

Deliver all the Mail Into the House

Kolstad built-in mail receptacles give absolute protection. They are convenient, attractive and permanently trouble-proof, weather-proof. Kolstad adjustable mail boxes and chutes fit any wall, frame walls from 6-9½ inches and brick walls from 9½ to 14 inches thick. Inside construction protects mail from pilferers.

Approved by U. S. Post Office Department.

Kolstad Mail Boxes

(Mail opening—2½x8¾ inches)

Large boxes especially recommended for absolute protection. Extra large receptacle keeps mail beyond reach of thieves. Will take magazines flat.

Numbers	Price	Description of Finish of Solid Bronze Front
50 for Frame Wall	$8.50	Sanded finish.
55 for Brick Wall	8.75	
51 for Frame Wall	10.50	Sanded finish, with doorbell and card holder.
56 for Brick Wall	10.75	
52 for Frame Wall	10.50	Hammered iron finish.
57 for Brick Wall	10.75	
53 for Frame Wall	12.50	Hammered iron finish, with doorbell and card holder.
58 for Brick Wall	12.75	

Kolstad Wide Chutes

(Mail opening—2½x8¾ inches)

Same outside and inside appearance as boxes. Receptacles 45° galvanized iron chutes.

Numbers	Price	Description of Finish of Solid Bronze Front
40 for Frame Wall	$7.50	Sanded finish.
45 for Brick Wall	7.75	
41 for Frame Wall	9.50	Sanded finish with doorbell and card holder.
46 for Brick Wall	9.75	
42 for Frame Wall	9.50	Hammered iron finish.
47 for Brick Wall	9.75	
43 for Frame Wall	11.50	Hammered iron finish, with doorbell and card holder.
48 for Brick Wall	11.75	

Kolstad Small Chutes

(Mail opening—2½x5 inches)

The least expensive of Kolstad built-in mail receptacles. Will take small magazines and papers folded.

Numbers	Price	Description of Finish of Solid Bronze Front
30 for Frame Wall	$5.50	Sanded finish.
35 for Brick Wall	5.75	
31 for Frame Wall	7.50	Sanded finish, with doorbell.
36 for Brick Wall	7.75	
32 for Frame Wall	7.50	Hammered iron finish.
37 for Brick Wall	7.75	
33 for Frame Wall	9.50	Hammered iron finish, with doorbell and card holder.
38 for Brick Wall	9.75	

Kolstad Vertical Chutes

(Mail opening—3x5 inches)

Recommended for use where space is limited. Will take magazines and papers folded.

Numbers	Price	Description of Finish of Solid Bronze Front
70 for Frame Wall	$7.75	Sanded finish.
75 for Brick Wall	8.00	
71 for Frame Wall	9.75	Sanded finish, with doorbell and card holder.
76 for Brick Wall	10.00	
72 for Frame Wall	9.75	Hammered iron finish.
77 for Brick Wall	10.00	
73 for Frame Wall	11.75	Hammered iron finish, with doorbell and card holder.
78 for Brick Wall	12.00	

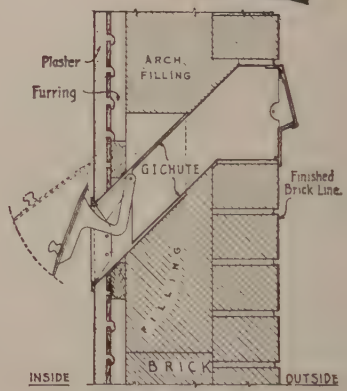
Other models not shown are Kolstad Side Wall Boxes which deliver the mail through a cross wall, and the largest approved apartment house boxes on the market.

CHUTES

No. 45 Wide Chute (For Brick Wall)

No. 43 Style of Front for Frame Wall

No. 30 Small Chute (For Frame Wall)



Chute in Brick Wall

No. 75 Vertical Chute

KOLSTAD MAIL BOX CO., 318 West 1st Street, Duluth, Minn.

MAILO-BOX

PAT. U.S. AND CANADA

THE ORIGINAL BUILT-IN MAIL BOX

Made by

PENN-GREG MANUFACTURING CO.

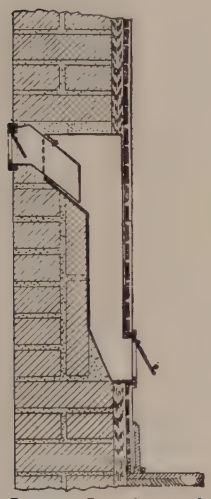
809-11 University Ave., St. Paul, Minn.

Style A1-A2
A popular model with name plate and door bell attached. Face plate of solid cast bronze. Dull or finished polish.

Style D1-D2
Face plate of solid cast aluminum, dull finish. This finish blends well with stucco exteriors.

The Mailo-Box is a complete unit ready for installation in any kind of house wall. Takes only a very short time to set in place.

Adds to the appearance of the building and has become a practical necessity for every modern home. Every home a good prospect.



Cross Section of Mailo-Box showing how it is concealed in brick wall.

Types, Styles and Finishes:

The Mailo-Box is made in two types, the first for wood or stucco and the other for brick or tile walls. There are seven different styles with outside face plates in solid cast bronze or cast aluminum in the standard designs. Specially finished face plates in verde green, oxidized, gun black, hand hammered iron finishes, etc., may be had if desired. The concealed part of box is made of high grade galvanized steel with locked and electrically welded joints. Size of box in all but two styles (E and H) is 10 inches wide, 21 inches long and 3½ inches deep (from front to back). Proper size to accommodate newspapers and magazines.

Can Be Set in Any Wall:

The Mailo-Box is adjustable to any thickness of outside wall, regardless of material used. Type 1 for frame or stucco walls is adjustable from 3½ to 7 inches. Type 2 for brick or brick veneer walls is adjustable from 9½ to 13 inches. Can be installed in homes already built.

Cross Section of Mailo-Box showing how it is concealed in frame wall.

Sold by Building Supply Dealers and Distributed by These Wholesalers

Alabama—Standard Building Material Co.
2700 N. 7th St., Birmingham
Colorado—Colorado Builders Supply Co.
1534 Blake St., Denver
Florida—I. W. Phillips & Company
Morgan & Bell Sts., Tampa
Georgia—Campbell Coal Company, Atlanta
Illinois—John C. Gustafson
224 W. 63rd St., Chicago
Illinois—Morehouse and Wells Co.
134 E. Main Street, Decatur
Indiana—Vonnegut Hardware Company
120 E. Washington St., Indianapolis
Indiana—Staples-Winkler Company
437 E. Colfax Ave., South Bend
Kansas—The Steel Hardware Company
Cor. Market & William, Wichita
Kentucky—R. B. Tyler Company
1446 Levering St., Louisville
Louisiana—Joseph A. Nunenmacher
1019 Mazant St., New Orleans
Maryland—E. S. Adkins & Company, Salisbury
Massachusetts—Centre Hardware Company, 2038 Centre St.,
West Roxbury Station, Boston
Michigan—Sterling Brick Company
5401 Wabash Ave., Detroit
Michigan—Delta Hardware Company
400 Ludington Ave., Escanaba
Missouri—Zahner Manufacturing Co.
1213 Walnut St., Kansas City
Minnesota—Hall Hardware Co.
Cor. 6th Ave. N. & 3rd St., Minneapolis
Minnesota—Janney-Semple-Hill & Co.
2nd & Marquette Ave., Minneapolis
Nebraska—Johnson Hardware Company
1217 Farnham St., Omaha
North Carolina—Brown-Rogers-Dixson Co.
Winston-Salem
New York—Albany Builders Supply Co.
NYC Ave. & Manning Blvd., Albany
New York—Weed & Company
95 E. Swan St., Buffalo
New York—Huguenot Bldg. Spec. Co.
119 North Ave., New Rochelle
New York—The Cramer Hardware Co., Inc.
20-26 Webster St., North Tonawanda
New York—H. H. Frey
1612 Holland Ave., Utica
New York—American Hardwall Plaster Co.
Utica
Ohio—Hardware & Roofing Supply Co.
618-620 Elm St., Cincinnati
Ohio—R. L. Queisser Company
1137 Schofield Bldg., Cleveland
Ohio—The Banner Lumber Co.
Adams & Ontario Sts., Toledo
Ohio—The Mahoning Building Specialties Co.
407 Park Theatre Bldg., Youngstown
Oklahoma—Builders Equipment Co.
406 South Peoria St., Tulsa
Oregon—Cress and Company
283 Oak St., Portland
Pennsylvania—Bartley Hardware Co.
6203 Penn Ave., Pittsburgh
Tennessee—Chandler & Company
426 West Depot Ave., Knoxville
Tennessee—Fischer Lime & Cement Co.
263 Walnut St., Memphis
Texas—Fred D. Henderson
3070 Wabash Ave., Fort Worth
Utah—Salt Lake Hardware Co.
105 N. 3rd St. West, Salt Lake City
Washington—Sam Hunter Co., Inc.
3155 Elliott Ave., Seattle
West Virginia—James J. Weiler & Sons
202 Elm St., Huntington
Wisconsin—Norman J. Pipkorn Company
796 Humboldt Ave., Milwaukee

PENN-GREG MFG. CO., 809-11 University Ave., St. Paul, Minn.

STRONACH NON-SPLITTING NAILS

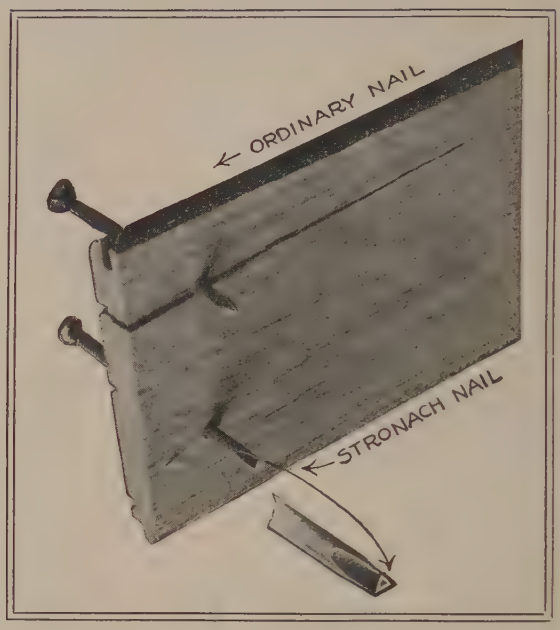
Made by STRONACH NAIL COMPANY

2008 Union Bank Building, PITTSBURGH, PA.

Save Money in Home Building or Remodeling by Using Stronach Non-Splitting Nails.

Note the special triangular driving end of the Stronach Nails. These nails can be driven in any kind of wood and will eliminate from 80 to 90% of the splitting of the material. This reduces waste, saves carpenters' time, and accounts in part for the extensive use of the Stronach Nails in home building today.

TRADE MARK
Copyrighted



Stronger Home Construction When Stronach Non-Splitting Nails Are Used.

On account of the special design of the Stronach Non-Splitting Nails, which gives due consideration to the properties of wood, squeaky floors are eliminated and a better built home secured because of their non-splitting feature and increased holding-power. Note, for instance, the following report from the Pittsburgh Testing Laboratory, one of the largest and most reliable firms of Testing Engineers and Chemists in the world.

U. S. Patent 1,466,676

Other Patents Pending

Report of Comparative Tests for Holding Power of Bright Common Diamond Pointed Nails Versus Bright Stronach Non-Splitting Nails.

All nails were driven radially or into the tangential surface, into the same piece of 4" x 4" dry yellow pine block as shown by the diagram opposite and pulled immediately afterwards.

Lot	Approximate number of nails per pound	Size	Depth Driven	Average Load to withdraw in pounds
No. 1	106	8d Diamond Pointed 2½x10¼	2"	329
No. 2	161	8d Stronach Special 2¼x11	1¾"	355

Stronach Special 8d driven 1¾" into the wood has nearly 8% greater holding power over the 8d Diamond Pointed Nails driven to the depth of 2".

Respectfully submitted
PITTSBURGH TESTING
LABORATORY

J. W. Meiswinkel

Engineer of Tests.

Unretouched Photographs.

The camera always tells the truth. The illustration presented here is an unretouched actual photograph.

More Nails to the Pound.

There are 52% more nails in a pound of 8d Stronach Special Nails than in a pound of the 8d Common Diamond Pointed type. This of course means that two kegs of 8d Stronach nails will do the work of 3 kegs of Diamond Pointed Nails. Therefore, these specially designed Stronach Non-Splitting Nails are cheaper.

Remember These Advantages and Buy or Specify Stronach Non-Splitting Nails When You Build.

First—Stronach Nails practically eliminate Splitting.

Second—Stronach Nails hold better.

Third—Stronach Nails have more nails per pound.

Fourth—Stronach Nails cost less per nail.

Sold to the BUILDING TRADE through RETAIL LUMBER DEALERS

STRONACH NAIL COMPANY, 2008 Union Bank Building, Pittsburgh, Pa.

ALLMETAL WEATHERSTRIP

Made by

ALLMETAL WEATHERSTRIP CO.

233 West Illinois St., Chicago

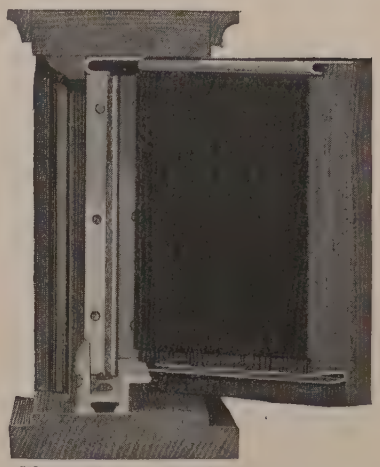
Illustrating one combination of material for Doors

Allmetal

REGISTERED U.S. PAT. OFFICE

HELPS YOU SELL THE HOMES YOU BUILD

CONTRACTORS AND BUILDERS CAN NOW MAKE THEIR OWN WEATHERSTRIP INSTALLATIONS



Illustrating one combination of material for Casement Windows

For many years the Weatherstrip Industry has been dominated by a few manufacturers; *some of whom will not sell their material* but *insist on doing the installation work themselves* and others who *sell their product to exclusive agents only.* In either case the Contractor has been compelled to sublet weatherstrip work. Yet there is nothing difficult about the installation of weatherstrip. It is *Carpenter Work,* and with the aid of our "Directions for Installing" book, any good mechanic can do perfect installation work.

WE FURNISH THE MATERIAL—YOU DO THE WORK

The Allmetal Weatherstrip Co. of Chicago does no installation work. We manufacture and sell weatherstrip material direct to the contractor and builder in the same manner as any other building material is sold. *We do not* demand that you push the sale of our products in return for having exclusive sales rights.

Why continue paying sub-contractor's profits on both material and labor when ALLMETAL Weatherstrip can be so easily and satisfactorily installed by your own men?

PRODUCTS

ALLMETAL WEATHERSTRIP for sealing the crevices between windows and doors and their frames to prevent loss of heat and to stop the infiltration of cold air, wind, and rain. ALLMETAL Weatherstrip protects interior decorations and furnishings from damage by dust and dirt. It stops windows and doors from rattling, deadens outside noise, and permits control of ventilation. *Saves 25% to 40% in fuel costs.*

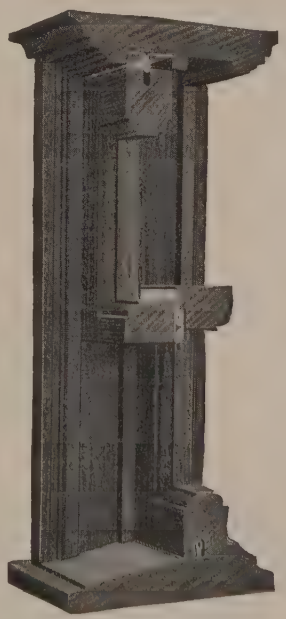
ALLMETAL Weatherstrip is made of zinc, copper, spring bronze, brass, and aluminum—all rust proof metals which will last the life of the building. The ALLMETAL line comprises nearly every kind of weatherstrip in patterns and sizes that meet every requirement. *Each pattern is designed for efficient weather protection and ease of installation rather than for makeshift talking points.*

ALLMETAL CALKING AND GLAZING COMPOUND (knife or hand gun consistency) for sealing the crevices between window and door frames and adjoining masonry or woodwork. It is also used for glazing work of all kinds.

When set it forms a tough skin on the surface but remains permanently pliable and elastic underneath, never cracking or drying out.

FOR OLD AND NEW BUILDINGS

Old as well as *new* buildings require the protection of ALLMETAL Weatherstrip. Many of our customers, having started making their own weatherstrip installations and thereby saving the sub-contractor's profit, are now doing weatherstripping regularly as a side line. In this way they have greatly added to their profits.



Illustrating one combination of material for Double Hung Windows

GUARANTEE

ALLMETAL Weatherstrip material is unconditionally guaranteed against imperfections in material or workmanship.

REASONABLY PRICED

The cost of ALLMETAL Weatherstrip is very nominal. We will gladly furnish an estimate of the cost of the weatherstrip material required for any plan shown in this catalogue, if you will let us know the name of the plan in which you are interested. We will also be glad to give an estimate of the weatherstrip cost for any other job if you will furnish us with the necessary blue prints, or will let us know the kind, number and dimensions of the openings. *You will be surprised to learn how little* ALLMETAL *Weatherstrip costs.*

SAMPLES

We depend on the quality of our material to sell our product. We will gladly forward, on request, an assortment of samples which, if compared with other weatherstrip material on the market, will clearly show its high standard.

SERVICE

Delivery: Practically all orders shipped the same day received making it unnecessary for you to carry a stock of material. The strip is cut to size required for the job. Your time is not wasted figuring the footage. Tell us the kind of openings you intend weatherstripping, give us the dimensions and we will furnish proper strip.

Models: We *loan* handsome models which will demonstrate to your clients the efficiency of ALLMETAL Weatherstrip and show them how it will be applied on their own doors and windows.

Tools: We *also loan* weatherstrip tools.

AN ESTIMATE TELLS ITS OWN STORY—LET US SEND YOU ONE

For further details and literature write to: **ALLMETAL WEATHERSTRIP CO.** 233 West Illinois St. Chicago

Chamberlin Weather Strips and Screens

Manufactured by CHAMBERLIN METAL WEATHER STRIP CO., Inc.

DETROIT, MICH.

Factories: Detroit, Mich., and Peru, Ill.

District Branches

Atlanta, Ga.	Charlotte, N. C.	Dayton, Ohio	Indianapolis, Ind.	Memphis, Tenn.	Omaha, Nebr.	San Francisco, Calif.
Baltimore, Md.	Chicago, Ill.	Denver, Colo.	Jacksonville, Fla.	Minneapolis, Minn.	Philadelphia, Pa.	South Bend, Ind.
Boston, Mass.	Cincinnati, Ohio	Detroit, Mich.	Kansas City, Mo.	Nashville, Tenn.	Pittsburgh, Pa.	Terre Haute, Ind.
Buffalo, N. Y.	Cleveland, Ohio	Flint, Mich.	Los Angeles, Calif.	New York, N. Y.	Portland, Ore.	Washington, D. C.
Charleston, W. Va.	Dallas, Texas		Louisville, Ky.		St. Louis, Mo.	

Branches in 100 Other Cities of the United States

Why You Should Insist on Chamberlin

You need weather strip protection as long as your home endures. So keep the following facts in mind. Because of conditions over which the most expert workman has no control—such as settling of a building, expansion and contraction due to moisture and weather conditions—the best of weather stripping installations may require some minor adjustments. Therefore, you should be fully protected. No individual can give you this protection, for his responsibility lasts only as long as he is in business.

Here Thoughtful Care Provides Fullest Comfort.

Corrugated Strips for the Sides of Sliding Windows

Characteristic of Chamberlin Superiority are the corrugated side strips for sliding windows. The sides of the sash groove fit against the bulging edges of the tongue of the strip. The groove is standard in width. Side strips are kerfed or slotted under the stops to insure best results. Corrugations 1/16" high reduce sliding friction to a minimum. All corners are joined.

Chamberlin Gives You Permanent Protection

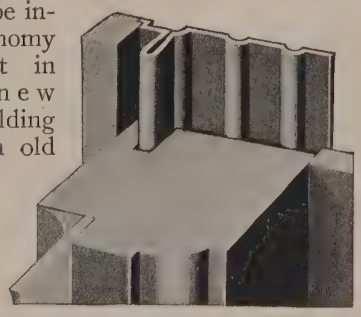
But Chamberlin—a million dollar company backed by 36 years of weather stripping experience—does protect you permanently with a service-guarantee good "for the life of your building." For every Chamberlin installation there is a Chamberlin factory branch responsible and ready to step in and keep the job right.

Installation

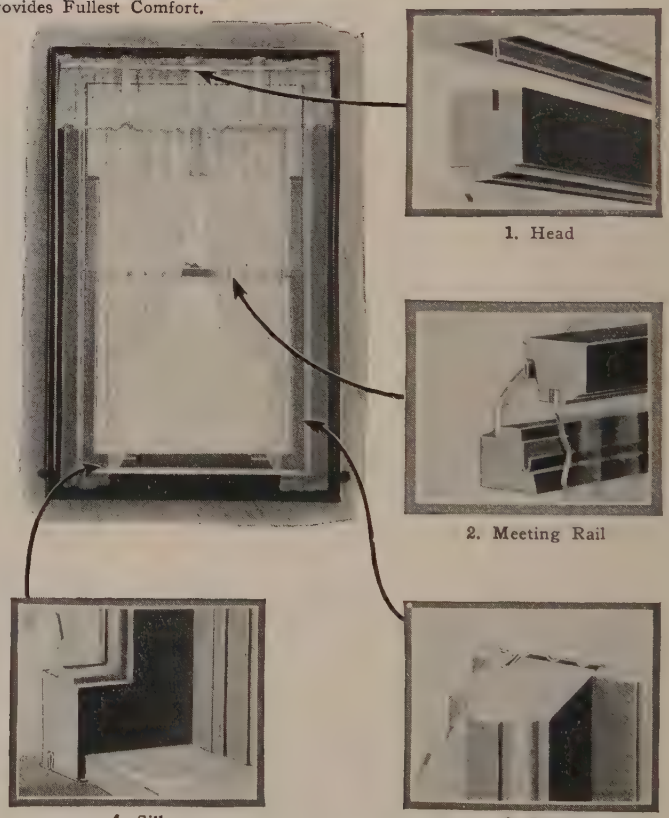
No matter where you live, Chamberlin mechanics install Chamberlin Weather Strips for you. You buy complete installations direct from the world's largest weather strip organization.

Chamberlin Metal Weather Strips

Chamberlin manufactures a type of weather strip suitable to any style of window or door, wood or metal, and adaptable to the needs of any climate. Chamberlin Weather Strips should be installed for heating economy and healthful comfort in every building—in new homes at the time of building to save in cost, and in old homes to modernize them. Free estimates on any plan indicated in this catalog will be given by the Chamberlin home office in Detroit.



Detail Showing Chamberlin for the Sides of Sliding Windows



1. Head
2. Meeting Rail
3. Jamb
4. Sill

Detail Showing Chamberlin for the Sides of Sliding Windows
Illustrated above: 1—Sturdy loop tongue of head strip; 2—New (Patented) interlocking meeting-rail strip; 3—Corrugated side strip; 4—Broad metal sill strip.

CHAMBERLIN METAL WEATHER STRIP CO., INC., Detroit, Mich.

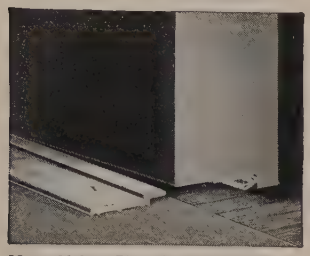
For Wood Casements

Chamberlin Weather Strips for wood casements consist of interlocking strips at head, center and sides and heavy zinc double channel at sill. Casements, whether opening in or out, are tightly sealed against rain, draughts and dust.

For Steel Casements

Chamberlin furnishes the correct weather strips for every type of window. Special attention has been given to the perfection of effective weather stripping for modern steel casements. An entirely new principle in design assures positive, permanent weathertightness at economical cost.

Chamberlin Solid Brass Sill-Dor-Seals

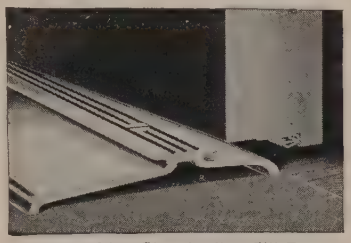


No. 69A Chamberlin Sill-Dor-Seal (1⅜ in. wide) for rear and grade doors.

The outside doors of homes and other buildings are frequently the most troublesome places to prevent draughts and rain leakage. These are effectually sealed with Chamberlin Weather Strips and Sill-Dor-Seals.

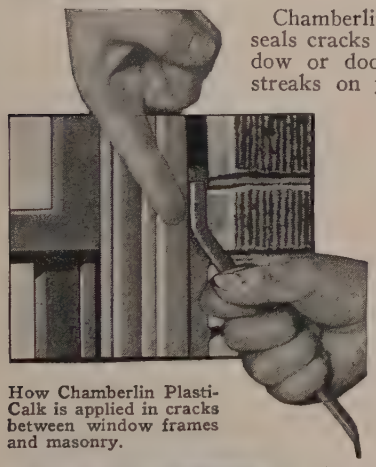
Sides and tops of outside doors are protected by heavy, tempered, hemmed edge, flexible spring bronze or by the interlocking type of weather strip.

Thresholds are equipped with extruded, polished brass Sill-Dor-Seals. Sill-Dor-Seals are furnished in several different styles to accommodate any door. They can be securely anchored to wood, stone or metal.



No. 34A Chamberlin Sill-Dor-Seal (4⅞ in. wide) for main entrance doors.

Chamberlin Plasti-Calk For Cracks Between Masonry and Window or Door Frames

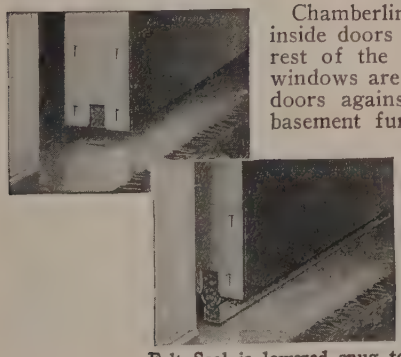


How Chamberlin Plasti-Calk is applied in cracks between window frames and masonry.

Chamberlin Plasti-Calk effectively seals cracks between masonry and window or door frames preventing dust streaks on your walls and excluding cold air. If your home is constructed of brick, stone, stucco, tile or similar materials, window or door frames can't be fitted snugly, leaving an open joint all the way around.

Chamberlin Plasti-Calk applied in this crevice remains soft—adheres perfectly—and does not crumble away. Ordinary cement or putty dries out and cracks.

Chamberlin Automatic In-Dor-Seals



Felt Seal is lowered snug to floor when door is closed and automatically raises when door opens.

Chamberlin In-Dor Seals used on inside doors keep cold air from the rest of the house when bed room windows are open. They seal closet doors against dust, confine to the basement furnace dirt and laundry steam, and prevent the escape of cooking odors from the kitchen.

Silent acting, automatic, ingeniously hidden in the bottom of the door, they do not interfere with rugs, mats, runners or carpets. A thick but soft piece of felt does the work.

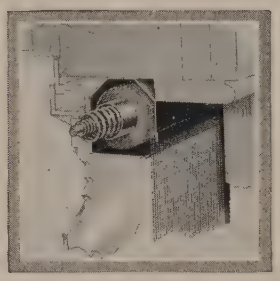
Chamberlin Roll Screens

You will appreciate these attractive and modern screens—screens that remain in place the year 'round and eliminate entirely for you the seasonal problems of installing, dismantling and storage. These screens are neat, compact, unobtrusive and roll up and down as easily and positively as a window shade.

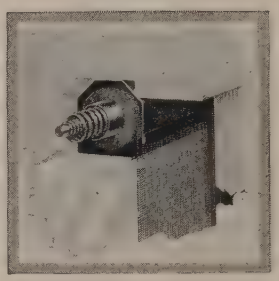
No matter what kind of window you have, wood or steel, Chamberlin Roll Screens provide a practical and efficient method of screening.

These screens are of typical Chamberlin quality. They are bronze throughout, with bronze screen mesh, bronze housings and bronze guides to prevent corrosion and bronze bearings to make them work easy always. Experienced Chamberlin mechanics install them and Chamberlin resources and reputation stand behind them. Chamberlin screen service is complete, including flat screens with wood or metal frames.

Details of Chamberlin Roll Screens

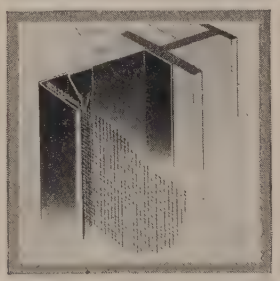


One method of installation with steel casements. Dotted lines indicate position of housing for concealed installation.

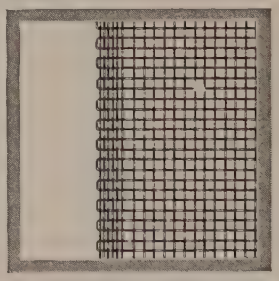


One method of installation for wood double-hung windows. Copper spring guide forms stop for lower sash.

The design of the housing permits a neat and unobtrusive installation. Note brass roller and heavy duty, Swedish steel spring.



Spring bronze guide stops screen from flying up when released and deflects edge into channels when screen is accidentally pushed out.



Sixteen mesh bronze screening with five-strand reinforced edge to insure greater durability and long service. A Chamberlin feature.

Advantages of this Modern Screen

Rolls up out of sight. Operates like a shade. No wear and tear on drapes.

No rain spattering thru dusty screens.

More daylight and ventilation. No annual storage and repairs. No under-sill operators. Windows easily cleaned. Always ready for use.

CHAMBERLIN METAL WEATHER STRIP CO., INC., Detroit, Mich.

HIGGIN WINDOW AND DOOR SCREENS

Manufactured and Installed by

THE HIGGIN MANUFACTURING CO.

NEWPORT, KY.

Sales Agencies in Larger Cities Throughout the Country

HIGGIN ALL METAL SCREENS

Products

- Higgin All-Metal Window Screens
- Higgin All-Metal Door Screens
- Higgin "Superior" All-Metal Rolling Window Screens
- Higgin All-Metal Weather-strips
- Higgin Wood Frame Screens
- Higgin Wood Frame Doors
- Higgin All-Metal Access Panels

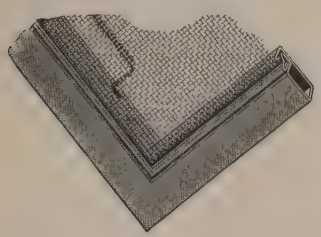
Service

This company has been builders of individually designed metal frame screens for more than thirty years. Higgin representatives are experts in their line, having had years of training and experience. There is one in almost every large city ready to serve you. They will cheerfully confer with Building Contractors, Architects and Home Owners. The Home Office Engineering Department will gladly co-operate in working out the more unusual problems that so often arise.

Metal Frame Screens

The Higgin All Metal Frame Screen is of hollow or tubular construction, made either of cold rolled copper bearing steel or of bronze, thickness being .036 inches. The steel frame is electro galvanized in the flat, and all stiles and rails are electrically spotwelded through the spline groove. No solder is used on the steel frame screens, making it possible to enamel the frames both inside and out and bake them to the high temperatures necessary. Bronze frame screens are made of the best grade commercial bronze, soldered and finished to specification or left unfinished to weather.

The frames are mitred at the corners and assembled on heavy reinforcement corners locked mechanically into the moulding. The mesh or screen cloth is held in place by means of a cam shaped metal spline so formed as to lock in place holding the cloth permanently taut. Splines may be easily removed.



Wire Cloth

The cloth or netting used is Genuine Anaconda Antique finish bronze; 16 meshes to the inch are usually furnished, but finer may be had when desired.

Casement Windows

Either wood or metal swinging out, are screened on the inside with either horizontal sliding, pivot hinged or rolling screens.

Horizontal sliding screens operate in channel guides at the head and a solid extruded brass groove track at the sill. The track may be had so that it can be removed, leaving a clear sill when the screens are out for the Winter.

Horizontal sliding screens are used singly or in multiple units. They are particularly adapted to group casements and do not interfere with drapes.

Pivot Hinge screens are also adapted to outswinging casements. The hinge is of the concealed type and when the screen is out there are no unsightly butts left in place.

For Double Hung Windows

Double vertical sliding, half height sliding, or top pivot hinged screens are the most suitable.. The sliding screens operate in channel guides mounted on the blind stop. Top hinged screens are placed in the outside rabbet. Stay bars can be provided to hold the screens open so that windows may easily be washed.

Door Screens

Higgin doors are built to order to harmonize with the house door detail. All joints are mortised and tenoned, glued and wedged. The wire cloth is rolled into a groove and held with a rattan spline which in turn is covered with a wood mould.

Higgin All-Metal Rolling Screens

Higgin All-Metal Rolling Screens offer a simple and practical method of screening out-swinging casement windows. When not needed the cloth rolls up into a box concealed in the head of the window frame. The advantages are obvious—no winter storing, always in place when needed, no interference with curtains or drapes.

The box, roller, tracks and locking rails are made of heavy gauge specially treated rust-proof steel. The use of double selvaged bronze wire cloth assures durability, beauty and long life.

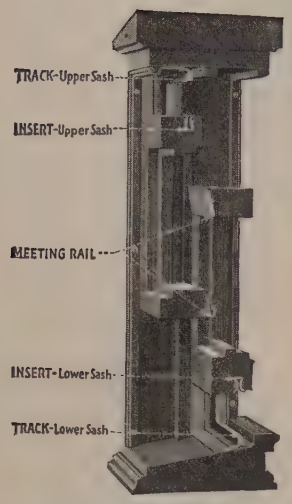
The locking rail is very rigid, being formed from a single piece of metal with a shaped groove running its entire length. The particular shape of the track gives it the rigidity necessary to hold itself in alignment after once being placed in position.

The spring construction eliminates all possible drag on the wire fabric and affords free and easy movement in all positions.

Illustration of the use of horizontal sliding screens in connection with outswinging steel casements

THE HIGGIN MANUFACTURING CO., 520 Washington Ave., Newport, Ky.

HIGGIN ALL METAL Weatherstrips



The patent INSERT Strip makes Higgin Weatherstrips extra draft-tight.

Products:

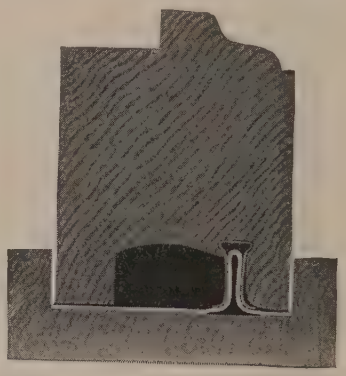
Higgin All Metal Weather Strips, All Metal Window Screens, Wood Frame Door Screens, Metal Frame Door Screens and Wood Frame Window Screens made to order. (For Screens see opposite page.)

We will contract to furnish and install Higgin All Metal Weather Strips in new or old buildings.

Service:

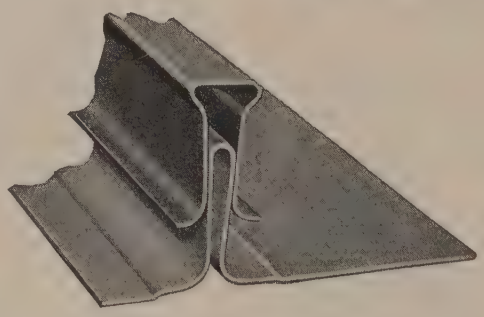
We bring to our task of serving you many years of manufacturing experience in various lines. The HIGGIN ALL METAL WEATHER STRIP has been designed to complete and perfect the task of shutting out unbidden air currents around windows and doors. We believe that nothing better exists in its line.

But the installation of the strips is just as important as the construction of the strips themselves. It is, therefore, well to remember that in addition to our sales organization located in principal cities of the country, we also have thoroughly competent, skilled fitters operating from the same centers to look after the minutest detail of installation. When your contract is placed with the Higgin organization you may rest assured of its having the most painstaking consideration.



Double Hung Windows:

The Higgin Two-Member Track and Insert Equipment for double hung windows consists of a rib track, fitted to the window frame. The rib or raised portion is 3/8-in. high and extends into a groove cut into the edge of sash at jambs, head and sill. This strip called the Track is usually made of zinc.



Insert:

The other strip called the Insert fits into the groove in the sash and is so formed that the spring sides or flanges contact lightly with the raised tongue or rib of the track and effectually seal the aperture. This strip is usually made of spring bronze of very thin gauge metal. The Insert resting on the slightly raised portion at base of rib on track insures easy sliding.

Not Affected by Sash Shrinkage:

The Higgin Weather Strip is all metal. There is nothing about it to wear out or get out of order. The method of construction is such that the two parts do not cut or damage each other. The sides only of the Insert come in contact with the tongue of the Track. The efficiency of the equipment is not affected by shrinkage of the sash. If the sash draws away from the frame the sides of the Insert contact with the tongue of the Track and effectually close the space.

NOTE: The Higgin Track for single member strip may be used without the Insert and is as effective as any other single member strip. This single member strip can be furnished at less cost but it is not so effective as when the two-member track and insert equipment is used.

Casement Windows:

The top and lock sides are equipped with a flat zinc or copper strip attached to sash which interlocks with a hook strip of same metal, secured into the rabbet. The hinged side, a rib track is applied, the raised tongue extending into a groove in the sash. The bottom of out-opening sash are usually equipped the same as for top and lock sides. In-opening sash are equipped with an interlocking trough of either brass or zinc. This equipment has proven very efficient in stopping air and water leakage.

Doors:

In the rabbet at sides and head are attached a compression spring bronze strip which contacts with door as it closes. For the bottom an extruded brass threshold with an interlocking brass hook and spring bronze contact strip makes a thoroughly air and water-tight equipment and provides a handsome and permanent threshold.

A line to the Home Office will result in placing you in touch with our nearest sales agency.

THE HIGGIN MANUFACTURING CO., Newport, Kentucky

STYLE A-B-D

Our Three Standard Styles

These styles and widths serve every requirement for doors, double hung and casement windows, regardless of thickness of sash.

Style A at left, width 1¼" is used on sides of windows, bottom of lower sash, the sides and tops of door frames and may be used on top of upper sash.

Style B center, 1⅛" is used on meeting rail of double hung windows, on bottom of doors and may be used on top of upper sash.

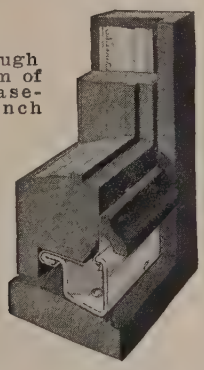
Style D at right, 1⅛" used on rabbetted sections of casement windows and doors or may be used in places where styles A and B would be too wide.

Here is a Numetal Weatherstripped window. The strip has been whitened in the picture for emphasis. On the window, Numetal is inconspicuous, yet continuously on the job.

The spring and tension in the strips take care of all shrinkage and expansion of windows, making a weatherproof, yet easily operated window at all times.

Numetal Weather Strips require no attention after installation and are everlasting.

Style G trough strip for bottom of in-swinging casement or French windows.



Style G strips are furnished in any length complete with heavy zinc trough, front and rear hook, nails and screws.

In most cases, styles A, B or D can be used successfully on bottom of both in-swinging and out-swinging casement windows, however, we can furnish the trough strip.

The Numetal Drip Cap, 1¼" wide, shown above, is for use on bottoms of some types of doors and casement windows. Furnished in any length.

Attractive dealer proposition in communities where we are not represented for Lumber Hardware and Building Supply dealers. Write us today.

Numetal

TRADE MARK REG U S PAT OFF

WEATHER STRIPS

for Windows & Doors

PATENTED

"We mustn't forget the weatherstripping!"

Numetal Weather Strips should be on windows and doors of every home for both COMFORT and ECONOMY.

In Winter, Numetal equipped homes are comfortably heated with less fuel—the saving runs as high as one-third—there are no cold corners or floors; no draughts. Rain or melting snow cannot seep in around windows or doors.

In Summer, Numetal keeps out dust and dirt, and shuts out noises. Windows won't rattle. There is less housecleaning for the home owner to do.

Stocked by Leading Lumber, Hardware, and Building Supply Dealers

More than six thousand Lumber, Hardware and Building Supply dealers stock Numetal. Most of them have handled Numetal for many years and know from experience its many advantages. If there is no Numetal dealer in your city, it will pay you to write us. We will see that you are supplied.

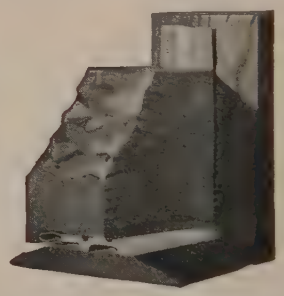
Do not confuse Numetal with the ordinary weatherstrip which is sold in coils and paper cartons. Numetal is a superior metal with a temper and design that will not permit coiling. Furnished in any length. No expensive grooving work on windows and doors to install Numetal. Easily installed—efficient—permanent—inexpensive.

Outside doors of homes and other buildings are troublesome at all seasons of the year unless weatherstripped. Photograph at left shows a Numetal equipped door.

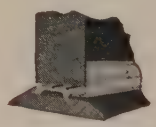
The weatherstripping on the door has been whitened for emphasis. Numetal Weather Strips make doors weatherproof. They are inconspicuous yet continuously on the job.

This door is equipped with Numetal Style E door bottom strip, which may be installed either on the outside or inside of the door, depending on the style of threshold.

Above, Style E Door Bottom Strip, a combination of lacquered, heavy brass and mothproofed felt. This type of strip is used with wooden thresholds and effectively keeps out rain, snow, draughts, dust and dirt.

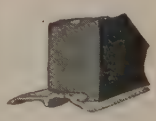


Style F Numetal, solid brass threshold, interlocking, with concealed hook. This style not only makes the door bottom weatherproof, but the neat, solid brass threshold adds beauty and dignity to the home.



This style, shown at left, is the same as shown above, except that it has the exposed hook.

Style FX is a heavier solid brass threshold, interlocking with concealed hook. All Numetal door bottom strips provide efficient weatherproofing, the styles varying to meet varying preferences.



Below, the Style FXX Numetal solid brass threshold, with fluted top, but without interlocking hook.

MACKLANBURG-DUNCAN CO., Mfrs.—Distributors, Oklahoma City, Okla.

INCINOR

---the gas-fired, portable Home Incinerator

Manufactured by HOME INCINERATOR CO.

MILWAUKEE, WIS.

Burns Rubbish and Garbage—Wet or Dry:

Incinor, portable and gas-fired, burns both garbage and trash—wet or dry. It cannot be clogged and the combustion is perfect. It first dries the accumulation and then burns it to a handful of odorless ash.

Important Facts about Incinor

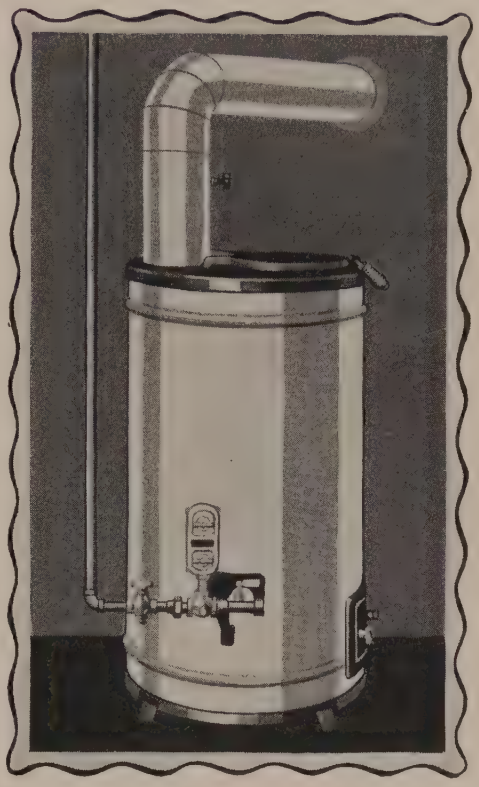
Incinor is manufactured in three convenient sizes, two-bushel, three-bushel and nine-bushel capacity. It can be equipped with an automatic shut-off which turns off the gas when the destruction is completed. In the average family, Incinor need be used only once or twice a week, or when nearly full of accumulated garbage, rubbish, trash, etc. The nine-bushel Incinor is used in larger homes, estates, and apartment houses.

Exclusive Features of Incinor:

Incinor has a cast iron fire bowl which will never burn out. This bowl also has an automatic feed which delivers the accumulation direct to the flame.

Another exclusive feature is the Drier Pipe which extends upward through the center of the mass, and conducts the gas heat to every part, thus assuring a quick drying-out process.

Specially constructed grates enable dumping of the ashes into the fire bowl at any time. This relieves the fire bowl of tin cans, glass or other unburnable substances without clogging it.



·INCINOR·

THE HOME INCINERATOR

Good Riddance

GARBAGE .. RUBBISH .. TRASH

BURN IT WITH GAS — THE DECENT WAY

Great Ease of Installation:

Incinor is as easily installed as a gas range. A gas-connection to the machine and piping to the regular flue are all the hook-ups required. It is as easy to operate as a gas stove or water heater, and can be quickly disconnected and moved.

You Can Recommend Incinor:

Leading architects, builders and gas companies all over the country are recommending Incinor. It has passed the rigid tests of the Modern Priscilla and Good Housekeeping Institutes and the leading Gas Company Testing Laboratories. It reduces fire hazards and protects health because it makes the trash barrel and garbage can obsolete. It enables the housewife to keep her basement neat and clean and helps add another floor to the house.

Complete information and an attractive booklet "The Decent Way" may be had by writing to the manufacturers.

Builders:—Send for File Catalogue AIA35J41 containing full specifications.

INCINOR DIMENSIONS

Capacity	2-Bushel	3-Bushel	9-Bushel
Height.....in.	30	39	36
Diam. of outer drum.in.	23	23	...
Depth.....in.	...	...	28
Width.....in.	...	...	40
Width over all.....in.	29	29	48
Gas pipe connection.in.	½	½	1½
Smoke pipe.....in.	6	6	10

Tested and Approved by the Bureau of Foods, Sanitation and Health — Good Housekeeping Magazine

HOME-TESTED AND APPROVED — PRISCILLA PROVING PLANT — SERIES No. 5061

Member of the American Gas Association

HOME INCINERATOR CO., Milwaukee, Wis.

Branches or Agencies in Over 100 Cities

KERNERATOR
REG. U.S. PAT. OFF.
INCINERATION

Garbage and Waste Disposal for New and Existing Buildings

See Local Telephone Book for Addresses

Made by THE KERNER INCINERATOR COMPANY
MILWAUKEE, WIS.

Product

The KERNERATOR Built-In-The Chimney Incinerator for the prompt, safe and sanitary disposal of garbage and rubbish of all kinds by burning without cost. Made in various sizes to meet requirements of small and large residences and apartment buildings. Also for schools, hospitals and other buildings.

Description (Refer to illustration)

The KERNERATOR consists of a brick combustion chamber, with fire brick lining, located in the basement of the building, into which is built a special arrangement of grates with patented by-pass flue to provide proper draft control for complete, successful and odorless combustion of garbage and all waste.

One or more receiving hopper doors (shown above) are located in the flue (regular chimney) on the floor or floors above. In homes the hopper door is located in or near the kitchen. The flue serves as a fall-way for garbage and waste deposited in the hopper door; also as a chimney to carry off the products of combustion during burnings.

The KERNERATOR is constructed in accordance with detailed working drawings, which are furnished with the parts. The drawings are clear, and the construction simple—so that the mason has no difficulty in building it.

Operation (No Gas, Coal or other commercial fuel required)

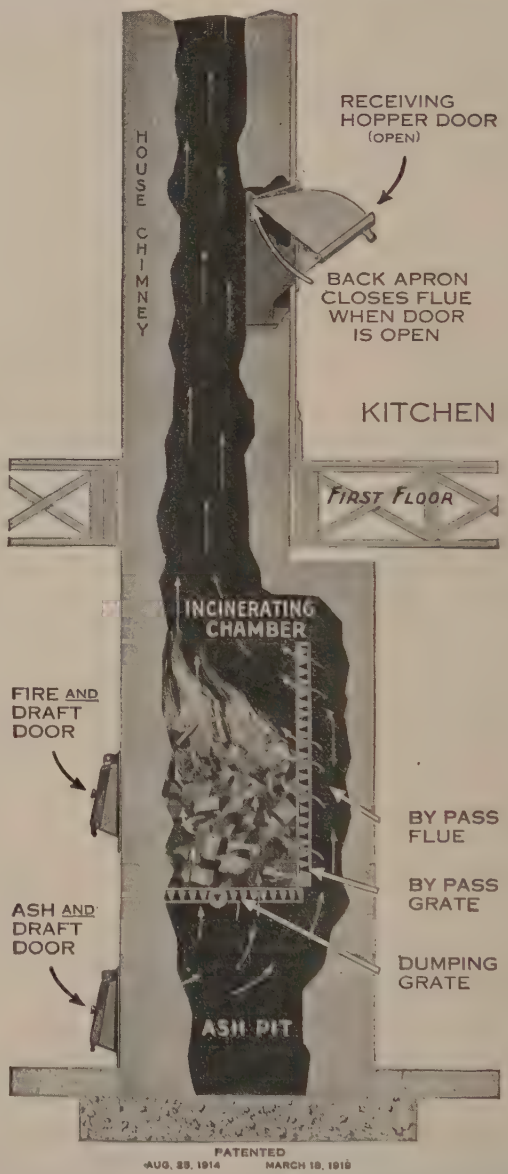
Not only garbage but all rubbish and waste—sweepings, waste paper, wilted flowers, rags, tin cans, broken bottles—everything that is no longer wanted is dropped into the hopper door and falls down the flue into the incinerator in the basement. When the incinerator chamber is nearly full the waste is lighted (a match does it) and burns itself up. Non-combustibles (tin cans and the like) are flame sterilized and dumped into the ash pit for removal along with the ashes.

By-Pass Flue and Vertical Grate

At the side of the horizontal grate on which refuse falls is the by-pass or vertical grate. Behind this is the by-pass or secondary flue. This patented arrangement permits air to pass up from the ash pit through and over the material on the horizontal grates. Between burnings this circulation of air causes considerable evaporation. During burnings air comes up this flue, passes through the vertical grate, and feeds heated oxygen to the top of the fire, which is always on top of the burning materials. As the heat liberates the gases from the material underneath, these gases pass up through the flames and are consumed. This is what enables the KERNERATOR to destroy all waste without the use of commercial fuel.

The Handy Hopper Door

Is conveniently located in the kitchen, where table refuse is immediately disposed of without leaving the room. No trips outside to a garbage receptacle. No accumulation of rubbish in cellar or attic waiting for "Clean-up Week."



Sectional view showing interior construction and operation of KERNERATOR. Notice the draft reaching point of burning through by-pass gate. The fire burns from top downward, consuming offensive odors.

THE KERNER INCINERATOR CO., 702 E. Water St., Milwaukee, Wis.

KERNERATOR
REG. U.S. PAT. OFF.
INCINERATION

Garbage and Waste Disposal for New and Existing Buildings

Kernerator Advantages

The KERNERATOR destroys all refuse on the premises where it originates—destroys it by burning—burns it without cost in the most sanitary, convenient and economical way, and with only one handling.

It's Sanitary

Unsightly garbage cans are banished. All insanitary refuse containers, pits and screened locations are done away with. Nothing to draw flies or other disease-carrying insects or vermin. Authorities agree that the proper method of garbage and waste disposal is to burn it on the premises where it originates.

It's Safe

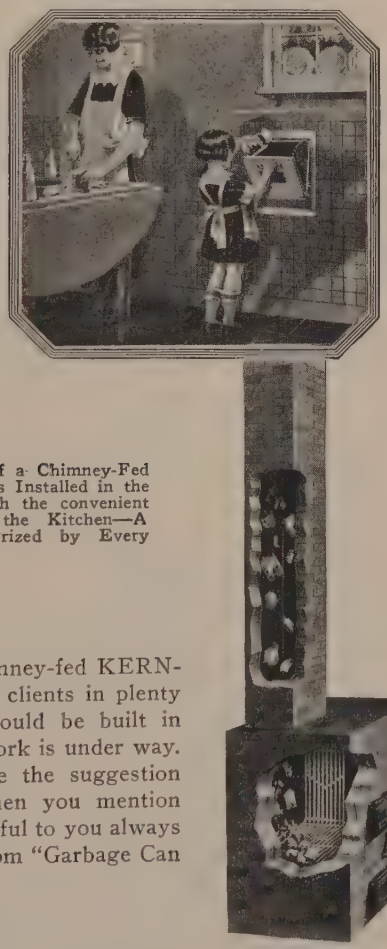
Garbage cans and waste piles are fertile breeding places for disease germs. Accumulations of rubbish in the basement are an ever-present fire and health hazard. The KERNERATOR eliminates this nuisance and danger.

It's Convenient

The safe disposal of all table, kitchen and household waste is done immediately without effort. Seventy per cent of the housewife's time is spent in "cleaning up." Much of this time is saved by the handy KERNERATOR door, right there in the kitchen.

It's Economical

The KERNERATOR costs nothing to operate. No gas, coal or other commercial fuel is required. The waste itself is fuel for its own destruction.



Sectional View of a Chimney-Fed KERNERATOR as Installed in the Average Home with the convenient Hopper Door in the Kitchen—A Feature Highly Prized by Every Housewife.

Suggest the Chimney-fed KERNERATOR to your clients in plenty of time—for it should be built in while the mason work is under way. They will welcome the suggestion enthusiastically when you mention it and will be thankful to you always for freeing them from "Garbage Can Slavery."

Include Kernerator in Building Plans

The Chimney-fed KERNERATOR, being a built-in unit, should be included in the plans, when provision can be made for a flue of proper size and location for placing the hopper door in or near the kitchen.

Minimum Flue Sizes (Inside dimensions)

Where but one receiving door is installed on the first floor, the flue dimensions must be 12x12 inches or larger. Where an additional hopper door is also installed on second floor of residence, the inside dimensions of the flue should be 16x16 inches.

Flue Can Serve Other Equipment

The smoke or vent pipes from water heaters and kitchen ranges may be connected to the KERNERATOR flue, if desired, without any interference with their operation or that of the Incinerator. All pipe connections from other equipment must be made directly into the flue above the incinerator chamber.

Fire-place flues must not be in any way connected to the KERNERATOR flue

Residences Without Basements

In many locations where homes are built with no basements, the KERNERATOR is placed against the outside of the building with the hopper door inside—and located in or near the kitchen.

Special Service

We have layout sheets showing all the standard KERNERATOR models, and with different basement layouts for each model. One of these will undoubtedly fit into your plans without any changes. These layouts will gladly be mailed on request.

Basement-Fed Kernerator for Homes already built

In homes already built, and new homes being planned with no suitable flue in or near the kitchen for the Chimney-fed Kernerator, the ideal incinerator is the Basement-fed Kernerator.

A Typical Basement-fed Kernerator Installation Built right against the regular chimney. Can also be located at distance from chimney and piped to it.

The illustration opposite shows the Basement-fed Kernerator in a home where it has been possible to build it right against the regular chimney. Where this cannot be done, the incinerator chamber can be located at some other point in the basement (as near to the regular chimney as convenient) and connected to the chimney by piping.

The Basement-fed Kernerator, like the Chimney-fed type, provides a large holding capacity (about 6 bushels on the small Model R, illustrated, for 5 or 6 room residences) to take not only garbage and combustible waste, **but all rubbish and non-combustibles, like tin cans, bottles, etc., as well** —and which nothing less in size can conveniently handle. It also has the Patented By-pass Flue and vertical grate which assures complete, successful and odorless combustion of garbage and waste.

The installation is the same as the Chimney-fed Kernerator with the exception that the waste is deposited in the basement combustion chamber through a feeding door in the upper part of the brick combustion chamber, at a height convenient for the dropping of all waste.

THE KERNER INCINERATOR CO., 702 E. Water St., Milwaukee, Wis.

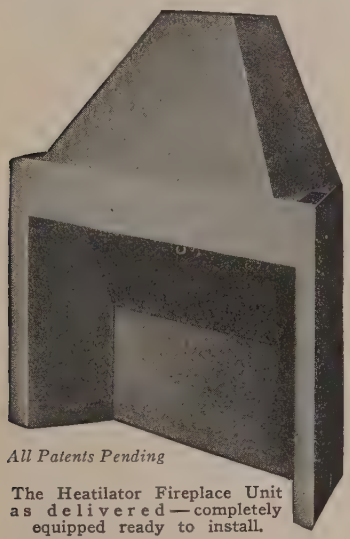
The Heatilator Fireplace Unit

Made by HEATILATOR COMPANY

E. Brighton & Glen Aves., SYRACUSE, N. Y.

Fireplace Charm with Furnace-like Heat:

The Heatilator is a boiler plate form around which any mason can build a fireplace that is absolutely guaranteed to operate perfectly and give more than double heat. It corrects the common faults of fireplace design and construction which cause smoking, cold air drafts, insufficient heat and waste of fuel. Yet the Heatilator does not affect the design of the mantel nor limit the selection of materials used in masonry.



All Patents Pending

The Heatilator Fireplace Unit as delivered — completely equipped ready to install.

The HEATILATOR has double walls that form an air chamber into which cold air is drawn through inconspicuous grilles or masonry lattice-work. This air circulates throughout the heating chamber and is discharged thru outlet grilles higher up in the masonry. The principle of operation is similar to that of a warm air furnace.

Saves Its Cost:

Firebrick for back and sides of firebox are saved. Damper and smoke dome are included. And much labor is saved in installation. The Heatilator practically saves its purchase price on installation alone. Fuel and heat saving goes on forever.

Specifications:

The inner shell forming the firebox is of 3/16" to 1/8" copperoid boiler plate iron. Down draft shelf and smoke damper are of same material. The outside and dome walls which serve as forms for permanent masonry are of 14 ga. copperoid iron. All seams are electrically welded. Positive poker control for the damper requires no mechanism or fixtures in the mantel.

No.	Finished Width	Opening Height	Fuel Capacity	Weight	Price
34H	33	28	up to 28 in.	285	$ 58.
39H	37	30	up to 30 "	340	68.
44H	42	34	up to 33 "	465	78.
50H	48	36	up to 39 "	580	96.
62H	60	40	up to 48 "	780	116.
74H	72	48	up to 54 "	1350	136.
28H	27	27	up to 20 "	235	53.

Freight Allowed East of Rocky Mts. Your dealer will order subject to inspection and approval—no obligation.

Grilles or Registers:

Pattern 4 is clay tile hand moulded. Others are cast iron, Gray, Japanned or Oxidized.
8 in. x 8 in....$ 1.50 each 10 in. x 10 in....$ 2.00 each

No. 1 No. 2 No. 3 No. 4

Angle iron support furnished if specified, 28" and 34" sizes $1. ea.—39" and 44" $1.50. ea. Larger sizes $2. ea.

A charming Heatilator-equipped fireplace. Note grilles for cold air intakes at floor line and warm air outlets above the mantel. The grilles can be located anywhere in the sides or front of the fireplace depending upon the design. Suggestions as to period designs sent free on request. Mention kind of masonry—brick, stone, stucco or tile.

A New Source of Heat and Comfort

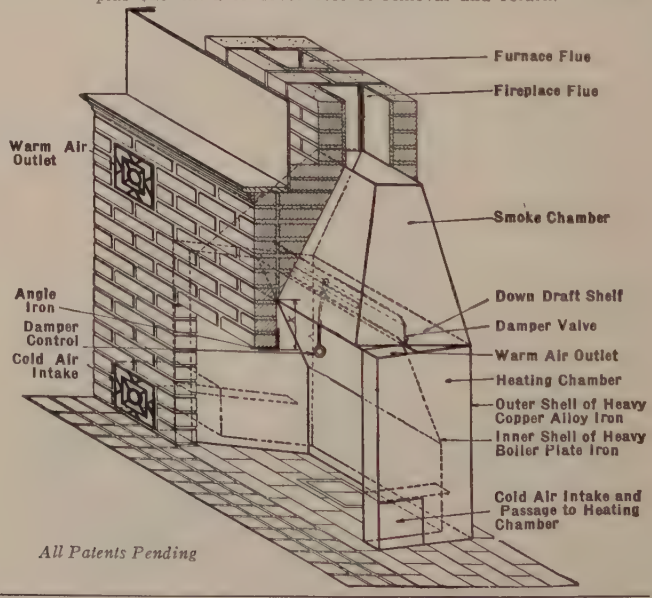
Anemometer tests show that the 34 in. Heatilator with a moderate wood fire produces 100 cu. ft. of air per minute. At this rate the entire volume of air in a large living room would circulate through the Heatilator two to three times an hour. Temperature of this heated air coming from the outlets is 200° to 250° F.

Other Features and Advantages

Insures scientifically correct construction and operation—enhances beauty of design—makes the use of fireplaces economical and popular—assures healthful ventilation—provides living comfort and cheer—increases property value and salability—costs little if any more—pays annual dividends on investment by saving in fuel and heat.

Fireplace Success Guaranteed

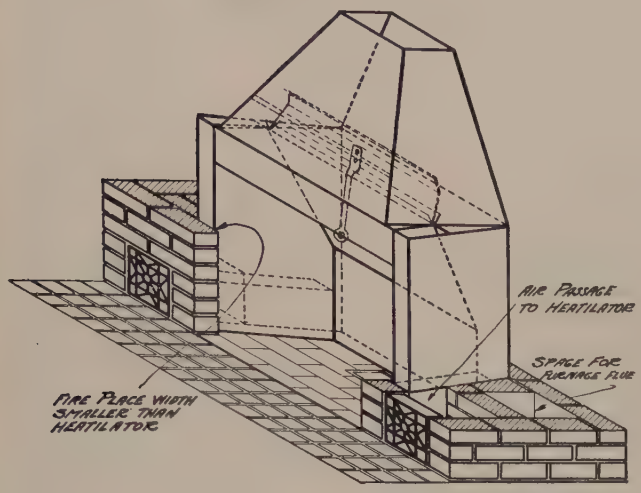
We Guarantee complete satisfaction with any Heatilator-built Fireplace or will refund the Heatilator purchase price in full, plus $20 extra to cover cost of removal and return.



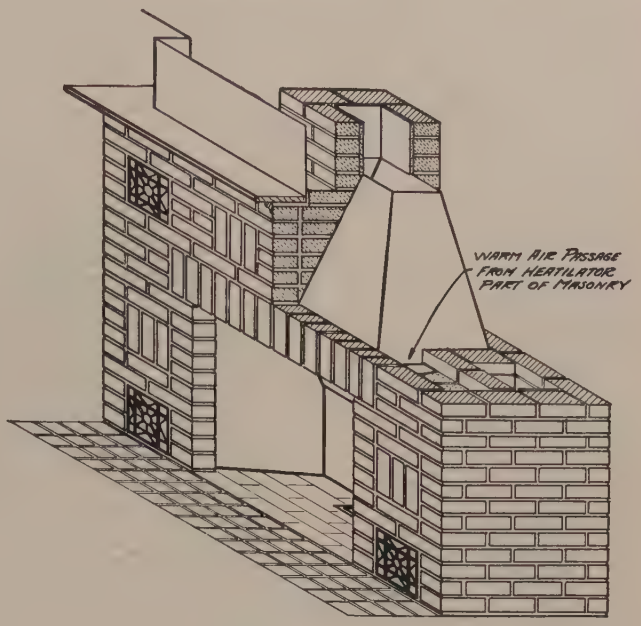
All Patents Pending

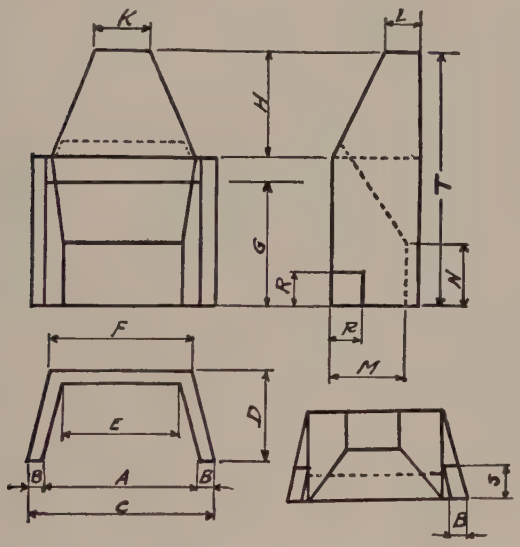
HEATILATOR COMPANY, E. Brighton & Glen Aves., Syracuse, N. Y.

The Heatilator enables you to build any fireplace with absolute assurance of perfect operation, absence of smoke, and double heat from same fuel.



With the Heatilator in position on a foundation of firebrick, the masonry of any kind is built up around the form. For standard size 34H the base provided should be at least 67½" x 29½".





HEATILATOR DIMENSIONS

Model	A	B	C	D	E	F	G	H	K	L	M	N	R	S	T
34-H	34½"	3"	40½"	20"	27"	32"	27¼"	24"	12"	8"	17"	15"	8"	8"	57½"
39-H	39"	4"	47"	22"	30"	36"	29¾"	24"	16"	8"	18"	16½"	8"	8"	60"
44-H	44"	5"	54"	24"	32¾"	40"	34"	24"	16"	8"	19"	18"	8"	8"	66"
50-H	50"	6"	62"	26"	37"	45"	36"	30"	16"	12"	20"	20"	10"	8"	74"
62-H	62"	8"	78"	28"	44½"	55½"	38"	36"	16"	12"	22"	22"	10"	10"	84"
74-H	74"	10"	94"	30"	50"	64"	44"	36"	24"	16"	24"	24"	10"	10"	92"
28-H	28"	3"	34"	18"	20¼"	24⅜"	26"	24"	12"	8"	15½"	14"	8"	8"	56"

General Instructions:

The K and L measurements on diagrams and table at left correspond to size of chimney flue required.

Intake and outlet grilles or registers may be placed in ends instead of front of fireplace if sufficient room is provided.

Grilles shown in above mantel are design No. 1. See opposite page for stock designs.

Air passages may be provided by spacing the masonry—minimum, 30 sq. in. for each opening.

Cold air boxes may be built under floor and open into Heatilator chamber back of the masonry out of sight. Likewise the outlet openings may be hidden in the ends or high up in the chimney or they may open into adjacent rooms or into an upper story.

Masonry should extend slightly beyond Heatilator walls thus making finished opening 1 in. or 2 in. smaller in width than the size of Heatilator indicated by dimension "A" on sketches at the left.

Plan sheet and simple instructions with each Heatilator Unit.

Fireplace Success Guarantee

Remember: We guarantee complete satisfaction with any Heatilator-built Fireplace or will refund the Heatilator purchase price in full, plus $20 extra to cover cost of removal and return.

To Remodel Faulty Fireplaces:

Due care should be taken to determine the dimensions and type of construction of any fireplace to be remodeled. Even though it may be necessary to take down the front, take out the fire brick and then rebuild after setting the Heatilator in place, this is a short job for an experienced mason. The resulting satisfaction justifies the trouble and the moderate additional outlay. Consult your mason contractor or dealer and having determined that the change is practical, follow the same general instructions as for new construction. Send us full description and careful measurements of any fireplace you would like to remodel, and if it is practical to make the change we will be glad to assist you with plans and instructions. There will be no fee for this service.

HEATILATOR COMPANY, Colvin Station P. O., Syracuse, N. Y.

JACOBSON MANTELS AND ORNAMENTS

Manufactured by JACOBSON MANTEL & ORNAMENT CO.

322 East 44th Street, New York City

Louis Geib — Arthur P. Windolph

The Vogue for Mantels

Few homes today are complete without a fireplace, for the hearth is truly the heart of a home. The cozy warmth of an open fire and the lovely grace and beauty of a mantelpiece are the reasons for the fireplace's marked popularity.

But a mantelpiece, to be effective, must be well designed and carefully made. The mantels which have been left from ages past fulfill this requirement, but they are, unfortunately, prohibitive in cost for installation in the average home. However, the home-builder need not sacrifice the charming atmosphere of livability which a fireplace will give because of this; mantelpieces exactly reproduced from antiques can be obtained at very modest cost.

Georgian Reproduction

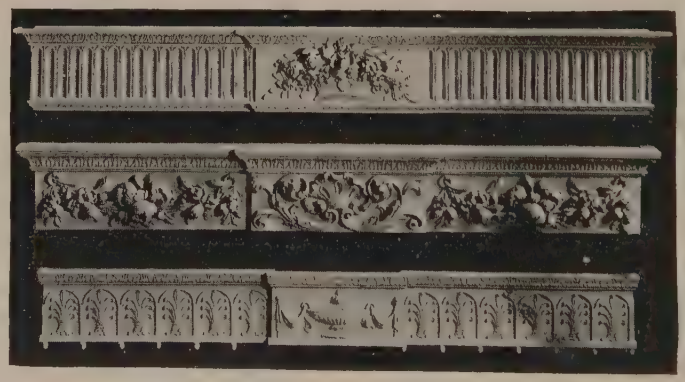
Color, texture and the exquisite carving, no matter how elaborate, of the original antiques are so perfectly matched that, except to experts, the reproduction is indistinguishable from the original. But, to assure low cost, these reproductions are not made from natural stone; they are cast in a special composition—known as ART STONE which gives the exact effect of travertine, lime or caen stone.

A Lovely Tudor Mantel

Art Stone Mantels

In texture, color, durability, beauty and finish, Art Stone is in every way the equal of natural stone. Despite its great strength and durability, Art Stone may be exquisitely carved; chiseling and tooling produce the intricate ornamentation of certain periods in the same clean, clear-cut delicacy which distinguished the originals.

Jacobson Mantels are obtainable in a wide variety of splendid designs . . . carefully culled from the finest exhibits of the world's museums and from famous palaces and mansions the world over. Designs of every period and modern designs are carried in stock. Art Stone Mantels are also made to individual specifications.



Handsome Window Cornices of Lignoid Compo

Low Cost of Art Stone

The cost of Art Stone Mantels is decidedly low . . . well within the means of the average home builder. The cost of installation is also reasonable, for the work can be done by any practical plasterer or tile setter. But despite the low cost of Art Stone Mantels, it should be remembered that they are in every respect a fine product—a true work of art—a piece of fine craftsmanship which will add beauty and value to a home far in excess of their cost. A profusely illustrated catalog of real interest may be had upon request.

English Design

Lignoid Compo Ornaments

Wood-carving has long been desired for its striking beauty and now the effect of wood-carving may be had at low cost. Lignoid Ornaments, designed with strict adherence to the finest examples of Grinling Gibbons and other famous master-carvers of his period, are made of Lignoid Compo. This inexpensive material is applied to raw wood with hot glue while still pliable and after drying it becomes a permanent part of the wood. A wide assortment of fine designs is carried in stock. expensively made of Lignoid Compo Ornaments.

JACOBSON MANTEL & ORNAMENT CO., 322 E. 44th St., New York

Colonial Damper

"GLO-HOT" ELECTRIC GRATE, "VICTOR" FIREPLACE UNIT AND EVERYTHING FOR THE FIREPLACE: GRATES, ANDIRONS, FIRESETS, FENDERS, HOODS, SCREENS, ASH TRAPS, ASH PIT DOORS, ETC.

Manufactured by COLONIAL FIREPLACE COMPANY

4652 Roosevelt Road, Chicago

Fireplace Contentment Certain

The Colonial Damper has been recognized for almost a quarter of a century by builders and home owners as the preferred fireplace control—unrivalled for its purpose. Happiness and Contentment in front of an open fire assured because the Colonial Damper avoids smoking, regulates draft perfectly, eliminates cracked fireplace facings and helps throw heat into the room.

Materials and Construction

The fundamental design of the Colonial Damper is unchanged, but new advanced improvements are embodied. For instance, the new Style "G" operating device permits architects and builders to get the best results by setting the fireplace damper high up in the throat.

There are no keys to come through facing. The operating lever comes out under the opening and moves right or left to open or close. When not in use it slides back out of sight.

Colonial Dampers now available with damper doors of "Armco" Rust Resisting Ingot Iron.

Sets High, Low, Forward or Back

Never before has a damper been adjustable to all possible positions in a fireplace throat and to all forms of construction. Fits every fireplace: marble, stone, brick, wood, tile, etc., and every form of opening, square or arched. Also the only damper made that takes up heat expansion.

Styles and Sizes

Colonial Damper is made regularly in twelve sizes for fireplace openings from 20 in. to 72 in. and in three styles of operation.

Architects have enshrined the fireplace as the "heart" of the home, the center of family life, the source of inspiration, comfort and hope.

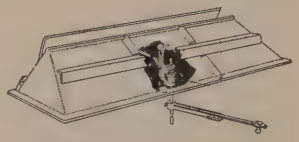
Homes throughout the land are happier because in them the fireplace, the "heart" of the home is controlled by a dependable Colonial Damper—the "brains" of the fireplace. It supplies the necessary restraint and regulation to insure dependable and steadfast functioning. It eliminates all the disagreeable features of the old fireplace and retains its healthful, ventilating value, its attractive charm and appealing romance.

The "Glo-Hot" Electric Fireplace

Gives real fire effect as of glowing coals and heats the room at the same time without the necessity of flues. A practical auxiliary heating plant that has no open flames and no fumes. Heat is absolutely odorless and clean. Comes complete ready to set in fireplace opening and connect with electric outlet.

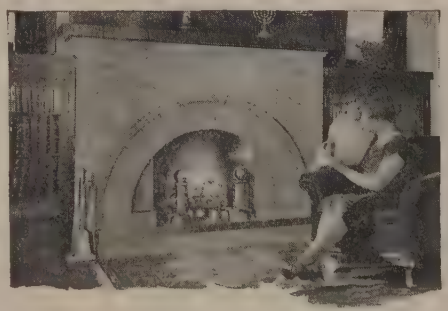
Built to resemble an old English hooded grate; heating element is the new, practically indestructible "Glo-Bar" heating unit concealed under the hood. Practical, longlasting, economical. Three styles and three capacities, standard being 1000 watts—110 volts.

To the left and below are illustrated genuine fireplaces equipped with Colonial Dampers.



Style "G" extension operating device enables the Colonial Damper to be set up high in the throat where only the best results of draft control can be obtained.

The "Glo-Hot" Electric Grate sets in any fireplace opening or in an open room. A complete heating unit that attaches to baseboard electric outlet. Looks like live coals and HEATS—without ashes, dirt or odor.



"Victor" Electric Fireplace Unit, illustrated at the right. Richly fills that vacant space and adds immeasurably to the comfort and beauty of any room. The clean, odorless, healthful and cheerful heat radiated by the "Victor" Fireplace makes it invaluable as an auxiliary heating unit.

Complete folders, descriptive of any of the "Colonial" Products sent free on request.

The Victor Electric Fireplace—a complete fireplace unit built ready to set against any wall like a piece of furniture. Includes mantel, facing, grate, amber coals and "Glo-bar" heating element. Complete, beautiful, practical and economical.

COLONIAL FIREPLACE COMPANY, 4652 Roosevelt Road, Chicago

COVERT FIREPLACE SPECIALTIES

Made by THE H. W. COVERT COMPANY

243 East 44th Street, NEW YORK

How to Build an Efficient Fireplace:

There are three vital parts in fireplace construction—the Throat, Smoke Chamber and Flue. If these are properly constructed, the fireplace will function satisfactorily in every way, barring the influence that nearby high buildings or high walls may have upon it.

Throat:

The construction of this most important part of a fireplace is simplified through the use of a Covert Damper.

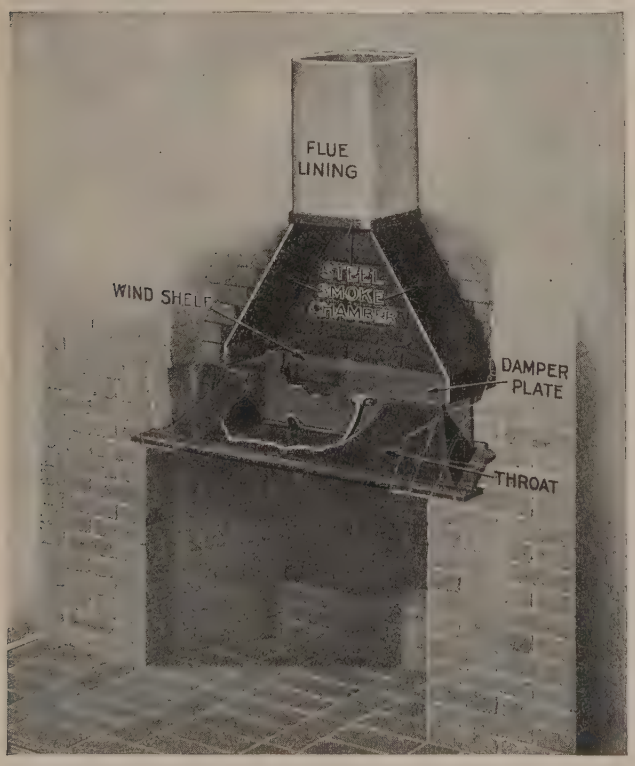
In addition to acting as a support for the arch brick, Covert Dampers provide a properly designed, smooth and substantial Throat that will lead all smoke and gases up the flue. It is provided with a valve to control draft. Covert construction secures the ledge or windshelf at the back of the throat which is important in checking down drafts.

Smoke Chamber:

It is important that the side walls of the Smoke Chamber, which is above the throat, should be smooth and should narrow from bottom to top where the flue proper begins, at the proper angle to afford a smooth chamber or compartment through which all smoke and hot gases will travel into the flue without being retarded.

This construction is best accomplished by using the Covert Smoke Chamber which is a steel form affording perfectly smooth side walls sloped at the proper angle, and with a collar at the top upon which the tile flue is started.

The use of this form saves considerable in mason's time in forming properly sloped walls in brick work, besides adding greatly to the efficiency of the fireplace.



Covert Specialties Assembled in Fireplace

Flue:

The flue should be properly proportioned to the size of the fireplace opening. A safe rule to follow in fireplace construction is to make the cross sectional area of the inside of the flue lining one-tenth to one-twelfth the area of the fireplace opening. It is always better to have the flue too large rather than too small.

Size of Opening:

A height of 30 inches is sufficient for fireplaces up to 48 inches wide with a proportionate increase in height for wider fireplaces. The depth should be 18 or 20 inches for fireplaces up to 48 inches wide and never more than 24 inches deep for wider fireplaces. The back of the fireplace should be narrower than the front, the side walls sloping towards the back wall at a ratio of about 5 inches to each foot of depth.

Covert Improved Damper:

This damper is very popular with contractors and builders because of its simplicity and the excellence of its design and construction. The valve plate is made of unbreakable steel, is easily removable, and is controlled by a simple ratchet placed just under the center of the arch. The damper is made in convenient sizes up to 5 feet.

Covert "Face or Side Control" Damper:

Front Operation

Side Operation

This damper is designed to operate from either the front or side of the fireplace by a simple turn of a polished brass knob. The mechanism is very simple, having no worm or gear. All parts are easy to get at. It is made in all sizes up to four feet.

Covert Old Style Dampers:

These are made in four different depths and up to seven feet long for very large fireplaces. All shown in our complete catalog.

Covert Ash Dump:

For installation in the hearth to permit ashes to be dropped through pit into cellar.

Covert Cleanout Door:

For installing in cellar wall to permit of easy removal of ashes from pit.

THE H. W. COVERT COMPANY, 243 E. 44th St., New York City

Donley Devices for Making Convenient Homes

Made by THE DONLEY BROTHERS CO.

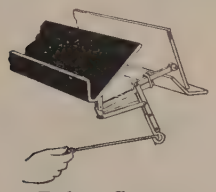
13923 Miles Avenue, CLEVELAND, O.

Products

Donley Devices include Andirons, Ash Dumps, Basement Columns, Basement Windows (Steel), Clean-Out Doors, Clothes Posts (Metal), Coal Chutes (Window and Grade Line), Dampers, Electric Meter Boxes, Fire Baskets, Garbage Receivers, Package Receivers and Mail Receivers.

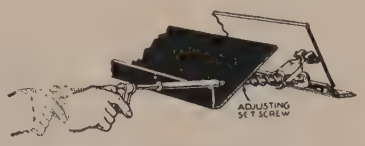
Fireplace Dampers

Donley Dampers make successful fireplaces by preventing smoking and smudging and elimination of waste of heat up the chimney. Damper provides smooth, metal throat for the fireplace as well as perfect draft control. Two types of control: Rotary, controlled by operating rod through metal front, or Poker control. Complete installation instructions accompany each Damper. For the following widths of Fireplace opening: 24, 30, 36, 42, 48, 54, 60 and 72 inches. The Donley Book of Fireplaces, containing many fireplace designs, construction plans and installation photographs sent upon receipt of 25 cents to cover mailing.



Poker Control

Diagram shows how this damper is controlled by hooking an ordinary poker into ring and pushing or pulling until desired position is reached.



Rotary Control

To open or close this damper you rotate the knob that protrudes through mantel front. Diagram shows mechanism.

Coal Chutes

Donley Coal Chutes protect building against damage during coal delivery. They are burglar-proof and have an automatic latch that is released by chain from within, without entering coal bin.

Frames are of unbreakable, malleable iron, doors of copper bearing steel or of malleable iron with heavy meshed glass and steel protecting shield.

See catalog for sizes. Also make Grade-line Chute with special drainage feature for low-set or terraced buildings.

Garbage Receivers

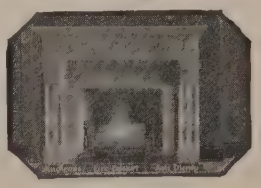
Located underground near kitchen entrance or beneath floor of rear porch, the Donley Garbage Receiver is inconspicuous, fly-proof, dog-proof and sanitary. Consists of inner container enclosed in outer water-tight cylinder, both of heavy gauge, galvanized metal. The service lid of Parkerized rust-proof steel is lifted by foot lever, leaving both hands free to carry dishes.

Mail Receivers

A strong, cast bronze door on outside, to receive mail and a brushed aluminum inside door from which mail is removed. Comes fully assembled, ready to install.

Three designs: Straight chute 2½ x 8¾" mail opening; box type which admits magazines and papers, 2½ x 8¾" mail opening; and chute type which is narrower but takes any magazine, roll or paper, mail opening 2½ x 5".

Fire Baskets and Andirons

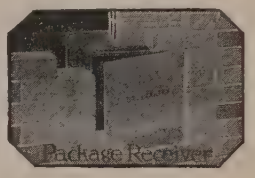


Donley Fire Baskets combine beauty and utility. The simple graceful lines harmonize with any decorative scheme and its sturdy construction fits it for years of service. Ends are easily lifted out to permit burning of logs. Designed to fit properly shaped hearth.

Donley Andirons are made in six designs and a variety of finishes with special attention to utility and sturdiness combined with grace, simplicity and the pleasing charm of modern decoration.

Ash Dumps: Donley Ash Dumps provide a convenient and clean method of removing ashes. Automatic Dump closes itself after ashes have been pushed through. The common dump is opened and closed with poker.

Package Receivers

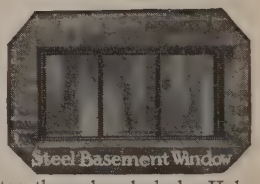


A wall safe for receiving milk, groceries, etc. Automatic lock prevents removal of parcels until inner door has been opened, when outside door is automatically prepared for next delivery. Made of heavy gauge steel, fits between 16-inch center studding, is 11½ inches high, 14⅛ inches wide and 9 or 6 inches deep. Approved by Good Housekeeping Institute.

"Outside Reading" Meter Box

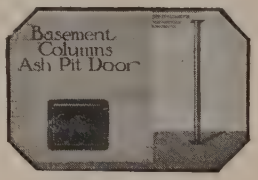
Donley Meter Box permits meter reading without entering basement, contains meter and safety switch and is installed in foundation wall. Meter read through glass panel, is 13½ inches high, 16½ inches wide, 10⅝ inches wall depth, provided with all necessary knockout holes for wiring. Approved by Good Housekeeping Institute, Central Stations and Electrical Contractors.

Steel Basement Windows



These steel Basement Windows admit 75% more daylight and provide better ventilation than wooden windows. Frames (3/16-inch steel) are narrower and more attractive, also much stronger than wood. Will not warp, shrink, swell nor rot. Welded and riveted at every possible point of strain. Strong hinges, easy action. Positive wedge-shaped lock draws frame and sash closely together when locked. Holes provided for screening. Made in five sizes for any type of construction. Sash easily removed for glazing.

Basement Columns and Clean-Out Doors



Basement Columns are neat, fire-resisting, economical and easily installed. Made of reclaimed pipe, thoroughly painted and provided with cap and base. Supplied in 4 and 5-inch diameters and 6-feet, 6-feet 6-inches, 7-feet, and 7-feet 6-inch lengths.

Clean-out Doors are strong and neat construction, and close fit. Large sizes for removing ashes from pit. Small size placed at base of chimney flue for soot removal.

Ask for Complete Catalog

The Donley Catalog illustrates and describes in detail, all Donley Devices, including many not shown here. This Catalog is sent upon request. A copy of the Donley Book of Successful Fireplaces, containing 60 fireplace designs, construction details and illustrations of fireplace equipment, will be sent upon receipt of twenty-five cents to cover cost of mailing.

THE DONLEY BROS. CO., 13923 Miles Ave., Cleveland, Ohio

GABRIEL ROLLED STEEL PRODUCTS

Manufactured by GABRIEL STEEL COMPANY

2441 Bellevue Ave., DETROIT, MICHIGAN

Products

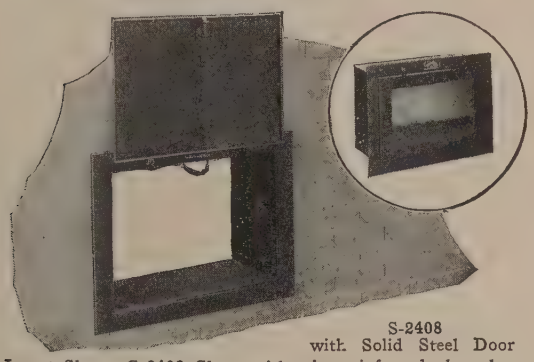
Coal Chutes—Package Receivers—Dome Dampers—Ash Pit Doors—Ash Dumps—Apartment Garbage Receivers—Scaffold Brackets—Scaffold Horse Legs—Inserts—Steel floor Joists.

GABRIEL ROLLED STEEL PRODUCTS

Quality, Construction and Guarantee

All Gabriel Products are guaranteed to be 100% satisfactory. They are constructed of special rolled steel making them practically unbreakable. All joints are electrically welded. Comparison shows Gabriel Quality.

Gabriel Rolled Steel Coal Chute



S-2408 with Solid Steel Door

Insert Shows G-2408 Chute with wire reinforced glass door.

The Gabriel Coal Chute is neat and attractive in appearance. Made of rust resisting, copper-bearing rolled steel, which entirely eliminates broken hinges, doors or frames. All fittings Parkerized to insure against rust. Joints are electrically welded throughout. Hinges are of very heavy rolled steel and designed to hold the door in a vertical position when open. Automatic spring latch is made of heavy rolled steel. Hopper is easily attached or removed, and is designed to lie perfectly flat on bottom of chute when not in use. Equipped with roller and chain attachment which permits of operation from any point desired.

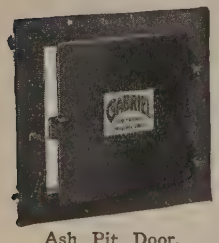
Furnished either with rolled steel or glazed door. In the glazed doors, ¼-in. glass is attached by means of special glazing clips. Glass is bedded and face puttied, and protected on the inside by heavy wire guard.

Sizes: 16 x 24 and 22 x 32 in. for 8, 12½ and 17-in. walls.

Package Receiver—Inside Door.

Gabriel Package Receiver

Neat, inconspicuous and weather-tight. Harmonizes with kitchen design. Made of heavy rolled steel plate, with two latched doors—one outside and one inside. Handles designed to permit installation with doors opening either to the right or left. Made for 12 x 14 in. wall opening. Width permits installation between studs of standard spacing, 16 in. on centers. Body of Receiver is made in three depths: 5, 9 and 13 in.



Ash Pit Door.

Gabriel Ash Pit Door

Made entirely of rust-resisting, rolled steel. Door and frame are true fitting, insuring practically an air-tight closure. Frame of door is electrically welded and door is a single piece of heavy rolled steel plate.

A deep lug anchor is turned up at each of the four corners to facilitate installation and insure secure anchorage in chimney.

The hinges and keeper are practically unbreakable.

Made in four sizes: 8 x 8, 8 x 10, 10 x 12, and 12 x 16-in.

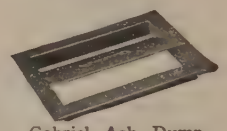
Gabriel Rolled Steel Dome Damper

The Gabriel dome damper accurately controls the draft, promotes cleanliness, saves fuel, and is conveniently operated. Its vertical front flange permits its use regardless of the construction of the fireplace and seals the joint between the rough brick and the fireplace facing. It is substantially constructed, operated with ease, stays in position and can be had for handle, poker, chain or push-rod operation. Furnished in six sizes: 24, 30, 32, 36, 42 and 48 in., with or without horizontal front angle.

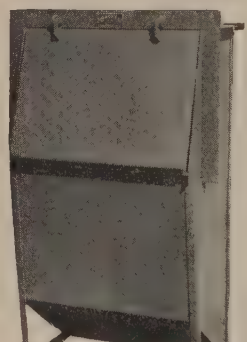
Dome Damper for Fireplaces showing handle operator.

Gabriel Ash Dump

The Gabriel Ash Dump is unbreakable, with an unremovable leaf. Frame is electrically welded, and heavy enough to withstand any usage. Will not warp or twist with use. Made in single leaf for 5" x 7" opening, and double leaf for 4" x 8" opening.



Gabriel Ash Dump.



Store Front Coal Chute.

Gabriel Store Front Coal Chute

The same neat, attractive appearance which individualizes other Gabriel Products has been incorporated in the construction of Gabriel store front chutes. Copper-bearing rolled steel is used throughout, and all operating parts are Parkerized to insure rust prevention.

Chain operating device permits operation from any point. Burglar-proof lock securedly fastens automatically when the door is closed.

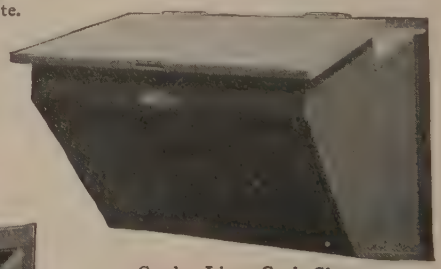
Size: 24" x 16" Opening Boot 12" deep.

Gabriel Grade Line Coal Chute

Constructed throughout from heavy copper bearing rolled steel, which is practically unbreakable. All joints are electrically welded. There are no bolts or rivets to work loose. Hinge pins are solid brass.

The practical design, careful workmanship and rugged strength incorporated in the construction of this chute are decidedly evident upon inspection.

Size: 21"x21" Opening. Boot 16" deep.



Grade Line Coal Chute.

Apartment Garbage Receiver.

Gabriel Apartment Garbage Receiver

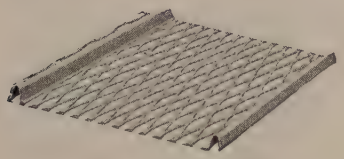
This Garbage Receiver consists of a heavy copper-steel frame and door with a boot which bricks into the wall. A heavy galvanized garbage pail having a capacity of five gallons is furnished. A hinged shelf, for the support of the pail, is solidly connected to the frame and swings outward when the door is opened. The entire weight of the container is carried on the rigid frame. Heavy rolled steel hinges and a rugged catch make up the hardware for this product. Size: Width 15½", Height 15½", Depth 10".

GABRIEL STEEL COMPANY, 2441 Bellevue Ave., Detroit, Michigan

KALMAN BUILDING PRODUCTS

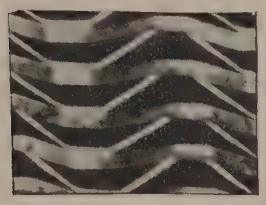
KALMAN STEEL COMPANY

ATLANTA
BALTIMORE
BOSTON
BUFFALO
CHARLOTTE, N. C.
CHICAGO
COLUMBUS
DAYTON
DETROIT
HOUSTON
KANSAS CITY
MILWAUKEE
MINNEAPOLIS
Export Office: NEW YORK
NEWARK
NEW YORK
NILES, OHIO
PHILADELPHIA
PITTSBURGH
ST. PAUL
SYRACUSE
WASHINGTON, D. C.
YOUNGSTOWN



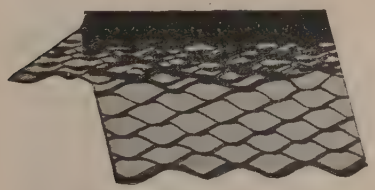
⅜" Rib Kalmanlath

This new ⅜" Rib Kalmanlath is the only flat strand lath on the market. The ribs are "V" shaped—are full ⅜ in. deep. The strands are wide and flat. They make plastering easier and faster, and prevent plaster waste. This new ⅜" Rib Kalmanlath is made of heavy gauge steel and has a high cross-sectional area for reinforcement.



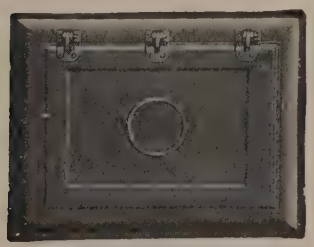
Cup Kalmanlath

This is the most popular lath for stucco construction. It is self-furring. The cup feature makes it bond mechanically with the stucco and assures the application of the proper thickness of stucco.



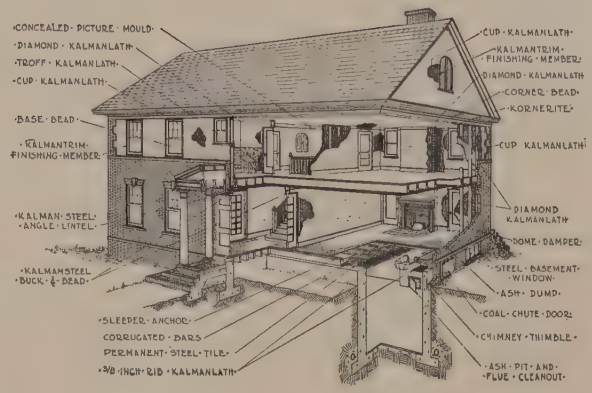
Kalman Perfection Bead

Kalman Perfection Bead is built with a wide scalloped edge. This eliminates hairline cracking which sometimes occurs when a straight edge bead is used. Kalman Perfection Bead comes straight, strong and true and is made of full weight galvanized 26 gauge sheet steel.



Kalman Coal Chute Doors

Kalman Coal Chute Doors are pressed sheet steel—there is no cast iron to break. All exposed parts are galvanized and then painted to prevent rusting. These doors can be furnished in two sizes, with either plain steel or wire glass windows.


CONCEALED · PICTURE · MOULD
DIAMOND · KALMANLATH
TROFF · KALMANLATH
CUP · KALMANLATH
BASE · BEAD
KALMANTRIM · FINISHING · MEMBER
KALMAN · STEEL · ANGLE · LINTEL
KALMANSTEEL · BUCK · & · BEAD
SLEEPER · ANCHOR
CORRUGATED · BARS
PERMANENT · STEEL · TILE
⅜ INCH · RIB · KALMANLATH
CUP · KALMANLATH
KALMANTRIM · FINISHING · MEMBER
DIAMOND · KALMANLATH
CORNER · BEAD
KORNERITE
CUP KALMANLATH
DIAMOND KALMANLATH
DOME · DAMPER
STEEL · BASEMENT · WINDOW
ASH · DUMP
COAL · CHUTE · DOOR
CHIMNEY · THIMBLE
ASH · PIT · AND · FLUE · CLEANOUT

The Kalman Line of Building Products

Home Building Products

Package Receivers
Dome Dampers
Chimney Thimbles
Coal Chute Doors
Ash Dumps
Ash Pit and Flue Clean-Out Doors
Basement Windows
Lintel Angles
Wall Plugs and Ties

Furring and Lathing Products

Cold Rolled Channels
Hot Rolled Channels
Stucco Reinforcement
Stucco Reinforcement Nails
Expanded Metal
Crimpt Metal Furring
Hanger Rods
Tie Wire
Staples
Nails

Metal Lath

⅜" Rib Kalmanlath
Diamond Mesh Kalmanlath
Cup Kalmanlath
Troff Sheet Kalmanlath
Flatrib Kalmanlath
¾" Rib Kalmanlath

Metal Trim

Steel Buck and Bead
Base Screed
Kalmantrim
Corner Bead
Base Bead
Concealed Picture Mould

Kalman Truss Joists and Accessories

Kalmantruss Joists
Kalmantruss Rigid Bridging
Wall Anchors
Beam Anchors
Masonry Bearing Plates
Bridging Anchors
Sleeper Anchors
Furring Extension Rods
Adjustable Floor Lath Clips
Header Angles

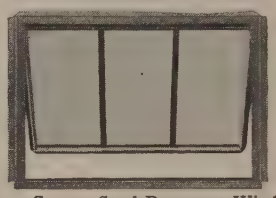
Other Kalman Products

Corrugated Bars
Column Spirals
Kalmantruss Reinforcement
Wire Fabric
Expanded Metal
Slab Spacers
High Chairs
Beam Chairs
Rib Chairs
Bar Clips
Inserts
Screed Chairs
Bar Chairs
Bar Mats
Center Strip
Dowel Supports
Marginal Bar Supports
Expansion Tubes
Guard Fence
Expansion Joint Filler
Metalrut
Column Forms
Removable Steel Tile
Permanent Steel Tile

Catalogs will be sent on request

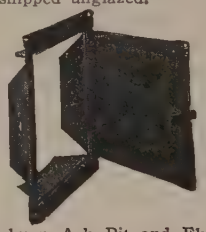
Kalman Dome Dampers

Kalman Dome Dampers are made specially to overcome the annoyance of a smoky or stubborn fire in a fireplace. They provide a positive means of regulating an open fire. There are no working parts to become easily detached or broken and they can be operated by either a rod or ratchet control. Made in 6 sizes.



Kalman Copper Steel Basement Windows

Kalman Copper Steel Basement Windows are made of extra heavy metal. They are provided with a two-piece frame. The frame and vent come into double contact with each other, making them absolutely weather-tight. They are easy to install and each window is provided with a cam-acting lock. Made in 4 sizes: shipped unglazed.



Kalman Ash Pit and Flue Clean-Out Doors

Kalman Ash Pit and Flue Clean-Out Doors come in four sizes (6x8; 8x8; 10x12). The wide flanges make them easy to install and assure a perfect masonry fit. In normal use, one of these Kalman Ash Pit and Flue Clean-Out Doors will last as long as the house itself.

Kalmantruss Steel Joists

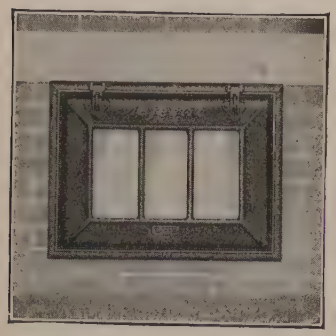
The Kalmantruss Joist is a double lattice steel truss with one-piece joints. There is not a weld or rivet in tension. This joist as applied with Kalmantruss Compression Bridging provides an improved firesafe floor and roof construction. Kalmantruss Joists are made for spans from 5-feet up to 30-feet 9 inches.

KALMAN STEEL COMPANY

MAJESTIC COAL WINDOW

Made by THE MAJESTIC COMPANY

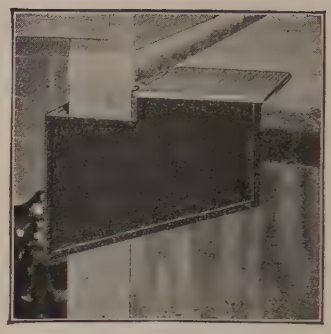
429 Erie Street, HUNTINGTON, INDIANA



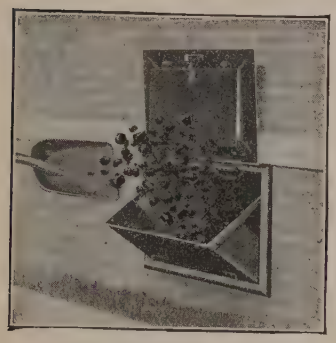
Glass Panel Styles Closed

The Majestic is the recognized leader of all coal windows—the standard of quality and value—made of Certified Malleable Iron, Keystone Copper Steel and heavy pressed steel, electro-galvanized—guaranteed break-proof and rust proofed. No better design or construction is known. Majestic is the last word in a coal window—made by the oldest and largest coal window manufacturer. More Majestics are in use than all other makes of coal windows combined.

All doors are of heavy pressed steel. Frames of all types are Certified Malleable Iron. Frame and door fit snugly—thoroughly weatherproof. Hinges are Certified Malleable Iron and are flat with double support, making it unnecessary to cut water table to provide clearance. Bodies and hoppers are Keystone Copper Steel. Angle Iron reinforcement allows masonry to be laid directly on body without use of lintel. Locks are automatic and burglar-proof. Unlatch from inside only by extended chain.

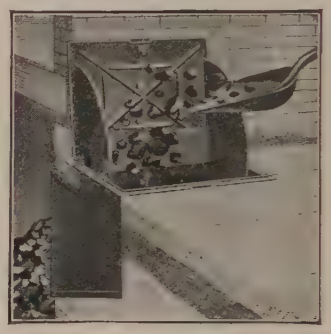


Grade Line Chute Closed



Glass Panel Styles Open

A Majestic Coal Window is a necessity in every well built home. It saves its initial cost in the protection it gives the building. When raised the door of the Majestic holds itself open automatically, guarding the building above against damage from flying coal. In the Glass Panel type a steel shield automatically covers the glass when the door is open. This type has three lights of heavy plate glass reinforced by metal strips and set in rubber to prevent breakage. Other types are the Solid Steel Door, Grade Line and Store Chutes—all illustrated on this page.

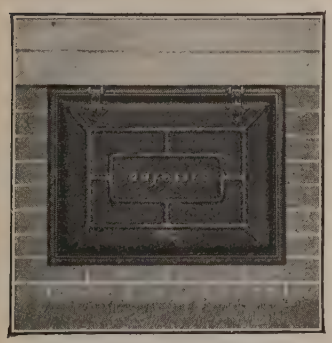


Grade Line Chute Open

Majestic Coal Windows, Pressed Steel Doors

No.	Style	Wall Opening			Ship. Wt.	List Price
		Wide	High	Deep		
M101	B	23″	17″	12″	54	$12.00
M101	D	23″	17″	12″	43	10.50
M203	B	32″	22″	17″	105	24.00
M203	D	32″	22″	17″	87	21.30
M500	.....	23″	17″	9″	37	9.00
M520	.....	32″	22″	12″	72	18.00

(Style B is with Hopper—Style D without Hopper)



Steel Door Styles Closed

Majestic Coal Windows, Glass Panel Doors

No.	Style	Wall Opening			Ship. Wt.	List Price
		Wide	High	Deep		
M 10	A	23″	17″	12″	62	$15.00
M 10	C	23″	17″	12″	51	13.50
M 20	A	32″	22″	17″	117	27.00
M 20	C	32″	22″	17″	99	24.30
M600	.....	23″	17″	9″	45	12.45
M620	.....	32″	22″	12″	82	22.80

(Style A is with Hopper—Style C without Hopper)

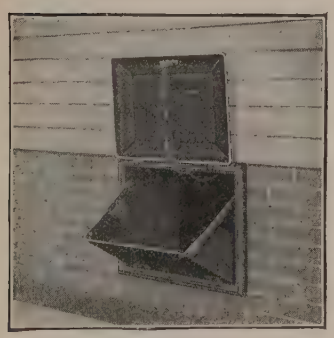
Store Chute Closed

Grade Line Coal Chutes

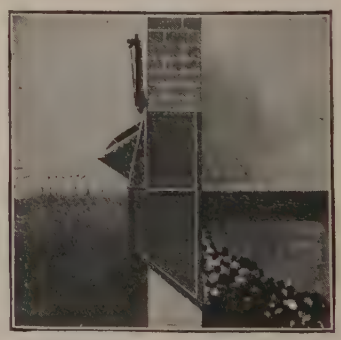
No.	Door Opening	Wall Opening		Ship Wt.	List Price
		Wide	High		
M16	23¼″ x 18¼″	25″	25″	135	$33.00
M18	29″ x 24″	31″	31″	218	48.00

Store Coal Chutes

No.	Door Opening	Wall Opening		Ship. Wt.	List Price	
		Above Grade	Below Grade		With Hopper	Without Hopper
M12	21″ x 15″	23″ x 16¾″	23″ x 25″	110	$33.00	$31.50
M15	29″ x 19¼″	31″ x 21½″	31″ x 24½″	155	48.00	45.30



Steel Door Styles Open



Store Chute Open

THE MAJESTIC COMPANY, 429 Erie Street, Huntington, Ind.

Underground Garbage Receiver

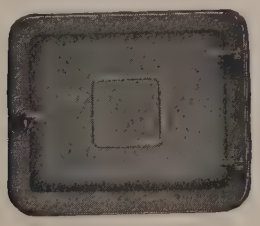
The modern, sanitary solution of the garbage problem. Keeps the garbage underground, out of sight, odorless, away from flies and animals. Endorsed by health authorities everywhere. Easily installed in ground—near kitchen door if desired. Lid is opened by pressure of foot, garbage dropped into can and foot pressure released, lid snapping tightly shut. Majestic Underground Garbage Receiver adds a pronounced touch of quality and convenience to the modern home. A real sales asset for homes built to sell.

Fireplace Ash Dump

Lid is permanently hinged to the frame so that it cannot fall out. The ash dump is essential to any fireplace. Keeps dust and odors from the room and permits ashes to drop to base of chimney.

Flue Clean Out Door

Made of highest quality cast iron, hand fitted. Malleable iron turn key and latch that locks the door securely. Anchor irons fold flat. Four sizes—twelve of each size to a crate. The No. 1012 is large enough for use as an ash pit door.



Ash Pit Door

Majestic Ash Pit Doors are built to fit closely and securely. Made of heavy cast iron with simple, effective latch. Hinges are sturdy. Made in two sizes—12″ x 15″ and 15″ x 15′.

Underground Garbage Receivers

No.	Can Capacity	Shipping Weight		List Price	
		Plain Can	Witt Can	Plain Can	Witt Can
5	5 gal.	31	35	$ 7.80	$ 8.70
8	8 gal.	48	52	9.90	11.10
12	12 gal.	57	63	10.80	12.60
15	15 gal.	64	68	11.40	15.90
20	20 gal.	97	104	14.70	19.90

Milk and Package Receivers

No.	For Wall Thickness	Ship. Wt.	Price
1	5 in. to 8 in.	36	$9.75
2	8 in. to 14 in.	40	9.90

Fireplace Dampers

No.	Width Fireplace Finished Opening	Ship. Wt.	List Price
26	26 inches	43	$ 7.90
30	30 inches	48	8.50
34	34 inches	52	9.20
38	38 inches	57	10.00
42	42 inches	60	11.00
46	46 inches	64	12.00
50	50 inches	67	13.00
54	54 inches	74	14.00
60	60 inches	85	15.50

[Fireplace Ash Dumps

No.	Outside	Inside	Shipping Wt. Doz.	List Price
6	8″ x 8″	6″ x 6″	45	$0.99
8	10″ x 10″	8″ x 8″	60	1.20
9	6″ x 9″	4″ x 7″	34	.81
10	7″ x 10″	5″ x 8″	43	.99

Cast Iron Flue Thimbles

Size of Smoke Collars	Size Overall	Weight Each	List Price
5″	5½″	3	$0.75
6″	6½″	3½	.81
7″	7½″	5	.87
8″	8½″	5¼	.93
9″	9½″	6¼	1.29
10″	10½″	9	1.38
12″	12½″	10	1.80

Flue Clean-Outs

No.	Size	Shipping Weight Dozen	List Price
88	8″ x 8″	77	$1.20
810	10″ x 8″	94	1.40
812	12″ x 8″	112	1.70
1012	12″ x 10″	131	2.00

Ash Pit Doors

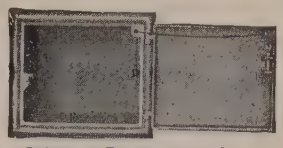
Size	Frame	Door	Shipping Weight	List Price
12″ x 15″	Cast	Cast	23	$4.80
15″ x 15″	Cast	Cast	32	6.00

Cistern Rings and Covers

Inside Diameter	Outside Diameter	Weight Each, Lbs.	List Price
18″	24″	50	$5.70
20″	26″	54	6.60
22″	29″	65	7.80
24″	31″	85	9.00

Cellar Wall Grates

Size	Weight, Each	List Price
4″ x 8″	1½	$0.39
6″ x 8″	2½	.54
6″ x 12″	3½	.75
8″ x 8″	3¼	.66
8″ x 12″	5½	.84
8″ x 16″	5¾	.93
10″ x 12″	5¾	1.11
10″ x 16″	11	1.65

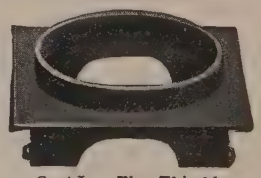


Milk and Package Receiver

Majestic Milk and Package Receiver is a convenience that costs but little and adds tremendously to the value of a home. Protects from annoyance, intrusion and theft in the delivery of packages. Deliveryman places packages in Receiver from outside, and closes door which locks automatically. Housewife removes deliveries from inside door at her convenience. Receiver consists of two cast iron frames and doors connected with an adjustable steel body. Easily installed in any wall—old or new—either frame or brick. A product that will help you sell homes you build.

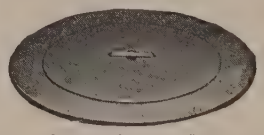
Fireplace Damper

To insure complete satisfaction every fireplace should have a Majestic Fireplace Damper. These dampers are designed on the one correct fireplace damper principle. They give perfect draft control and do not get out of order. Made with lintel integral with frame of the damper so that distance from top of opening of the fireplace to top of throat *must* be correct. Supplied in several types. Complete instructions for building fireplace and installing damper supplied with each shipment.



Cast Iron Flue Thimble

The Majestic Flue Thimble is installed in masonry of chimney to carry furnace smoke pipe. The pipe fits snugly inside the collar of the Flue Thimble and may be easily removed for cleaning.



Cistern Ring and Cover

Used for cisterns, cesspools, and other underground receptacles. Consists of heavy circular cast iron rim and cover. Cover is flush and has drop handle for easy lifting. Made in four sizes, ranging from 18 inches to 24 inches in diameter.

Cellar Wall Grate

A means of safe ventilation for basements. Fit securely and are neat in appearance. Made of heavy cast iron. Eight sizes.

THE MAJESTIC COMPANY, 429 Erie Street, Huntington, Ind.

DUBOIS WOVEN WOOD FENCE

Made in France and Imported Solely by

ROBERT C. REEVES COMPANY

Largest Distributors of Wooden Fences in America

101 Park Ave., New York, N. Y.

At 41st Street—Formerly at 187 Water Street

Reproduction of one of the Beautiful Paintings Featured in full color in National Advertising

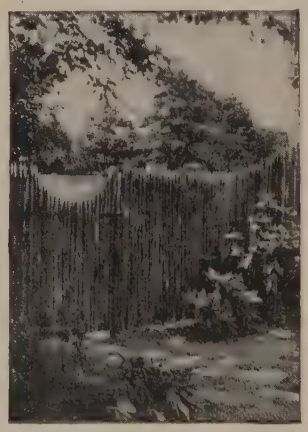
ARTISTIC, yet moderate in cost; graceful, yet very sturdy and exceedingly durable—that only begins to describe this lovely fence that answers so many needs of home builders.

It is probably the most versatile fence ever devised. It serves for country, suburbs, or city with equal facility—giving beauty, protection, privacy according to the need. It harmonizes with any style of architecture, adds picturesqueness, and will last a lifetime.

Made of Split, Live, Chestnut Saplings

Dubois is made by hand in France of split, live, chestnut saplings, woven closely together with heavy, rust-proof Copperweld wire.

It is the only French woven wood fence on the market, and purchasers are advised to insist on the genuine article.



The Friendly Fence

The saplings quickly mellow to a beautiful gray-brown tone, forming a natural background for shrubbery and flowering plants. No paint is required, so that vines need never be torn down, nor is it ever necessary to spend a cent on ordinary upkeep items, as Dubois withstands all kinds of hard usage and weather without having to undergo repairs.

Easy to Erect

Dubois is shipped in 5-foot sections, ready to erect against a framework of chestnut or locust posts and connecting timbers. The posts should be placed about 8 feet apart, and be set 3 feet deep and extend 5 feet above the ground. Rough 2 x 4 inch spruce timbers make good connecting pieces, and should be fastened at the top and 1 foot from the ground. The sections of Dubois are simply nailed against this framework. Here is an extra source of profit to the Dubois dealer who can supply the material needed.

Owing to its flexible construction, the fence follows perfectly the contour of the ground, making it equally suitable for use on level or rolling land.

ROBERT C. REEVES CO., 101 Park Ave., *at 41st Street*, New York, N. Y.

Roland Schultheis, Landscape Architect

Novel Arrangement of Dubois in a Suburban Community—Posts and Curved Heights are Special

Comes in Three Heights

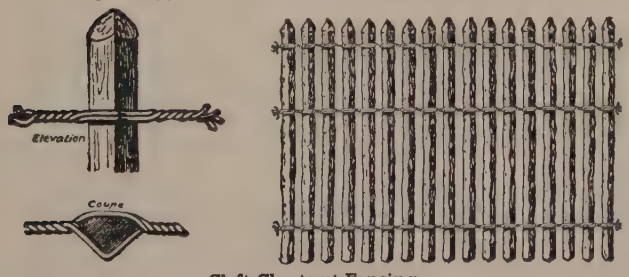
Dubois comes in three heights: 3 feet 10 inches; 4 feet 11 inches and 6 feet 6 inches, with charming gates to match, either curved or straight across at the top. The use of the higher fence is recommended where it is desired to screen a laundry yard, or give privacy to a garden. For all ordinary fencing purposes, the lower heights are entirely suitable and cost less than the higher fence. A special 18″ height is supplied on order, for bordering flower beds.

Send for Illustrated Portfolio—Free

A portfolio of beautiful views of Dubois containing valuable suggestions for city and suburban home builders (with Price List, Erection Data and Shipping Instructions), will gladly be sent free upon request. A more elaborate album especially prepared for Architects and Landscape Architects is also supplied without cost to our dealers. Our Service Department will also assist you in the solution of any fencing problem, either wood or wire.

Cleft Chestnut Fence

Like Dubois Woven Wood Fence except it is made by machinery instead of by hand, and palings are spaced ¾″ apart.



Cleft Chestnut Fencing

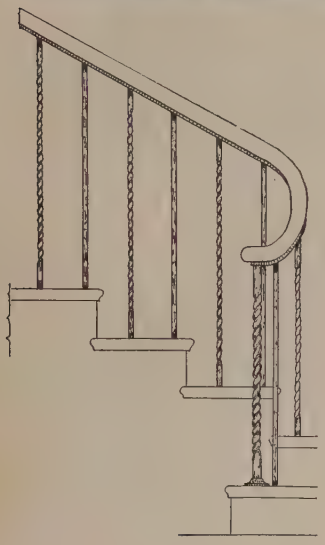
The *Woven* Wood Fence described above is made from small chestnut saplings bound closely together. For many purposes, fencing of a more open texture will answer. To meet the demand for a fence that is both artistic in character and very moderate in price, we offer Cleft Chestnut Fence, made by machinery from cleft chestnut saplings, spaced ¾ of an inch apart and firmly bound with three lines of 4-strand No. 13 galvanized wire. This style of fencing comes in 16-foot rolls and in three heights: 3 feet 10 inches; 4 feet 11 inches and 6 feet 6 inches.

At a little distance, Cleft Chestnut Fence closely resembles Dubois Woven Wood Fence, but owing to the wider spacing of the uprights, it does not, of course, afford the same degree of privacy. There are many places, however, in which it can be used, and at a desirable saving in cost.

ROBERT C. REEVES CO., 101 Park Ave., *at 41st Street*, New York, N. Y.

BADGER WIRE & IRON WORKS

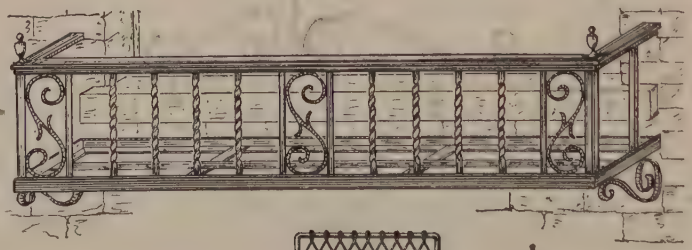
1200 25th Avenue, Milwaukee, Wis.



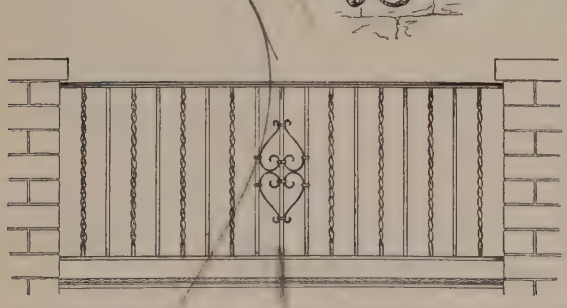
Ornamental Iron

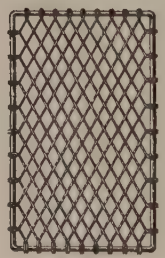
Write for our illustrated catalogue No. 8 (sent free) showing many designs on Balcony and Porch Railings, Baskets, Balconies, Gates, Stair Railings, Chimney Scrolls, Grilles, Fences, Gratings, Wire Work, etc.

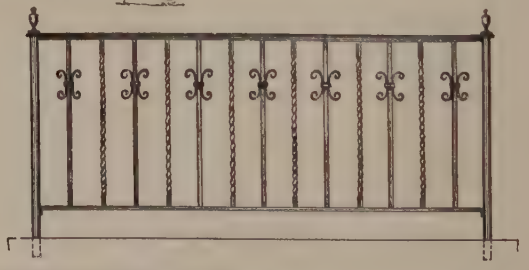
We can make up any design required to meet your particular conditions.



Send sketches and dimensions when writing for prices.







BADGER WIRE & IRON WORKS, 1200 25th Avenue, Milwaukee, Wis.

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Oakland, Calif. — Los Angeles, Calif. — San Francisco, Calif. — Portland, Oregon — Seattle, Wash.

CYCLONE SAFEGUARD CHAIN LINK FENCE

SPECIFICATIONS—Standard height, 6 ft. Built in heights from 4 ft. up to and including 10 ft. Chain Link fabric is full height of fence.

FABRIC—"Galv-After" Chain Link copper-bearing wire heavily zinc-coated (or hot-galvanized) by hot-dip process after weaving. No. 9 or No. 6 gauge wire woven in a 2 in. mesh. On heights 5 ft. and over, both edges of fabric have twisted and barbed finish. On heights 4 ft. and lower, one edge has twisted and barbed finish, the other has knuckled finish and it is recommended that the knuckled edge be placed at top of fence dressed below top rail with the barbed edge at the bottom.

POSTS—Hot-dip galvanized. Of standard full weight tubular copper-bearing steel, made by the National scale-free process.

Cyclone Safeguard Fence

Beautiful and dignified property protection for country estates and homes—also golf grounds and clubs.

LINE POSTS—2½ in. outside diameter, weight 3.65 lb. per lin. ft. where fence is 6 ft. and over in height. Where fence is less than 6 ft. in height, 2 in. outside diameter, weight 2.72 lb. per lin. ft.

END, CORNER, ANGLE AND PULL POSTS—3 in. outside diameter, weight 5.79 lb. per lin. ft. where fence is 6 ft. and over in height. Where fence is less than 6 ft. in height, these posts are 2½ in. outside diameter, weight 3.65 lb. per lin. ft.

GATE POSTS—The size and strength of gate posts for swinging and sliding gates have been carefully determined by our Engineering Department. Details upon request.

POST SPACING—Posts are spaced in line of fence not farther apart than 10 ft. centers.

DEPTH OF POSTS—Line posts for fence 4 ft. or lower are set 24 in. in concrete base; terminal posts 30 in. In 5 ft. fence, line posts are set 30 in., terminal posts 36 in. In Cyclone Safeguard Fence 6 ft. in height and over, all posts are set 36 in.

POST SETTING—Concrete post bases are of proper mixture, size and shape to furnish a foundation and support sufficient to withstand any ordinary strain or shock. A liberal factor of safety is provided.

POST TOPS—Hot-dip galvanized. All posts fitted with heavy ornamental ball post tops of malleable iron. The base of these tops fits into the post and a flange carries over the outside to cap the post against moisture.

TOP RAIL—Made by the National scale-free process, hot-dip galvanized. Tubular copper-bearing steel 1⅝ in. outside diameter, weight 2.27 lb. per lin. ft. Provided with expansion rail coupling. Top rail passes through post tops and forms a continuous brace from end to end of each stretch of fence. Top rail is securely fastened to end, gate and corner posts by malleable iron or pressed steel connections.

BRACES—Made by the National scale-free process, hot-dip galvanized. End, gate and corner posts are braced by tubular copper-bearing steel braces 1⅝ in. outside diameter, weight 2.27 lb. per lin. ft. Braces are spaced midway between the top rail and ground and extend to the first line post, fastened by malleable iron or pressed steel connections, then trussed from line post back to end, gate or corner post.

FITTINGS—All copper-bearing materials, hot-dip galvanized. All fittings used in connection with Cyclone Safeguard fencing and gates are malleable, wrought iron, pressed steel or aluminum.

FABRIC BANDS—Aluminum. Fasten the fabric to line posts and top rail, spaced approximately 14 in. apart.

FINISH—All materials entering into the fence construction except aluminum bands are heavily galvanized.

Cyclone Colonial "Complete Fence"

Standard Heights; 36, 42 and 48 in. Framework, tubular steel, hot-dip galvanized. Fabric, style "F." Pickets spaced 3 in. apart at top, 1⅜ in. apart at bottom.

Safeguard Fence with Wrought Iron Gate

This fence is worthy of a "front" position on your grounds. The wrought iron gate shown is especially designed for use with the Chain Link fence. It brings a touch of the ornamental, that completes the installation.

CYCLONE FENCE COMPANY, Waukegan, Ill.

PAGE FENCE ASSOCIATION

Distributing Chain Link and Wrought Iron Products, Fence, "Hi-Way" *(Trade Mark Reg. U. S. Pat. Office)* Guard, Panel Partitions, Window and Skylight Guards, etc., of the Page Steel and Wire Company, an Associate Company of the American Chain Company, Inc., Bridgeport, Conn.

215 North Michigan Avenue, Chicago, Illinois

Address Page Fence Association in City nearest you, or write direct to address above.

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Products

Chain Link Fence for protection and ornamental purposes for residences, parks and estates. Tennis Court Backstops, also enclosures for baseball grounds, race tracks and athletic fields, etc. Industrial Fence for factories, power stations, city, state and national institutions, including schools, parks and playgrounds, etc.

Ornamental Wrought Iron Fence, Gates and Entrances, where added beauty is desired.

TRADE MARK

The first wire fence ever made was designed by J. Wallace Page in 1883. For 46 years Page fences have been standards of good fence design.

Page Copperweld Fence Combines the Endurance of Copper with Strength of Steel.

Page now offers a fence made of Copperweld wire—a heavy exterior of pure copper molten-welded to the steel core—requires no painting—reduces maintenance.

Page Copperweld Fabric will endure as long as solid copper metal. The copper preserves the strength of the steel core, giving truly permanent protection. Discriminate buyers will order Page Copperweld Fence where beauty, permanent protection and ultimate economy are desired.

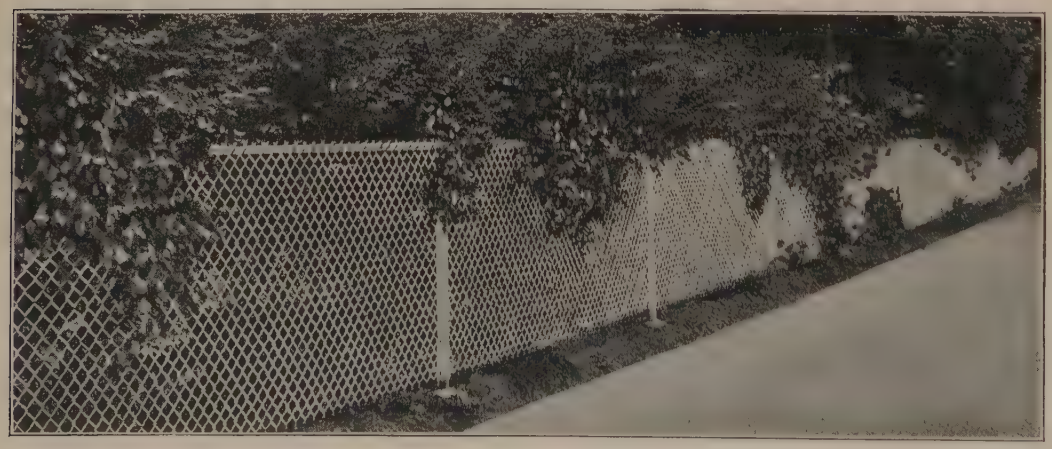
Vines and shrubbery need never be removed from Page Copperweld Fence. Property owners, landscape architects will find Page Copperweld Fence particularly adaptable where the fence is to be landscaped with vines and shrubbery. The pure copper exterior of the Copperweld wire requires no painting so vines and shrubbery grow undisturbed. This permits the placing of the fence as a protection for newly planted shrubs and gardens. Later, when these plants mature, they can screen the fence if desired. At the same time the Copperweld fence, which becomes an integral part of the hedge or shrubbery, prevents entrance to the grounds except through the gates.

Half Size Illustration of Page Protection Fabric No. 6 Wire, 2-in. Mesh

Only Page Drawn Wire Meets with Page Specifications

To assure the high standards for uniformity and strength set by Page engineers, every bit of wire used in Page products is rolled and drawn and galvanized in the Page mills.

The most rigid inspection guarantees only perfect material being used.



Vines and shrubbery need never be torn away from Page Copperweld Fabric. The pure copper exterior, molten-welded to the steel core requires no painting. Ideal for use where fences are to be landscaped.

No painting required with Page Copperweld Fabric. Page Fabric is now made in Copperweld—a pure copper exterior molten-welded to a steel core.

The standard weave for fence purposes is a 2-in. mesh made from No. 6 or No. 9 wire or a 1¾-in. mesh No. 11 wire for tennis courts. Also, made of copper-bearing steel, hot galvanized after weaving.

Fabric Heavily Galvanized After Weaving

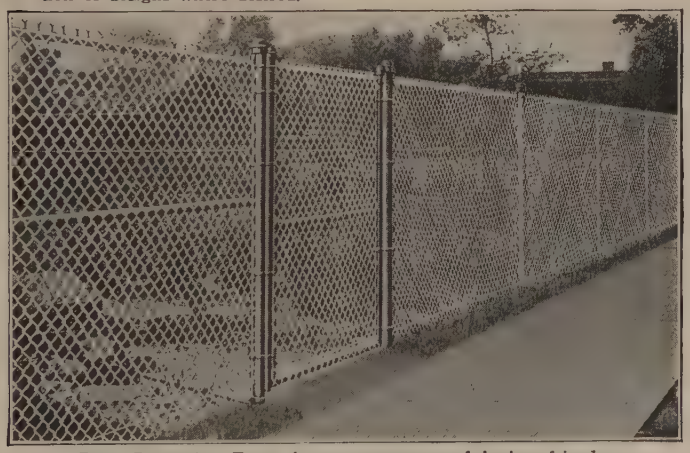
To guard against corrosion and rust, Page copper-bearing steel fabric is heavily galvanized after weaving with a uniform coat of zinc—approximately five times heavier than ordinary galvanizing. This is applied by a hot dip process perfected by Page and assures uniformity.

PAGE FENCE ASSOCIATION, 215 North Michigan Avenue, Chicago, Ill.

Page Ornamental Fence is made from Wrought Iron—the metal that has been proved by centuries of use. There is a wide range of standard designs, suitable for the simplest or most elaborate requirements.

The entrance gives the first impression of your grounds. Special gates and entrances can be furnished—Page Service includes preparation of designs where desired.

Drive and Walk Gates are furnished to match Page Fence with attachment for padlock, center stop, gate keeper and necessary hinges.



Page Protection Fence bars trespassers and invites friends.

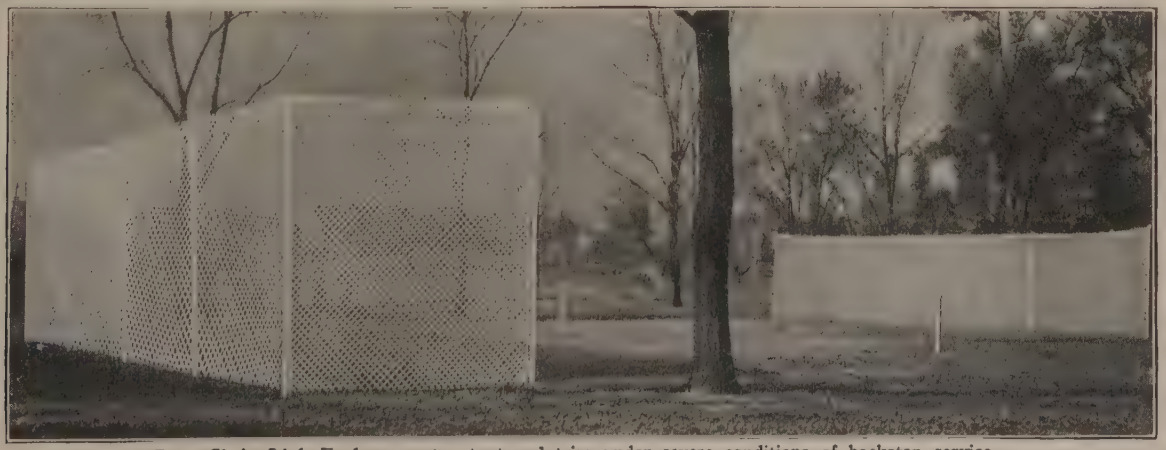
53 Service Plants erect fence everywhere

There is a Page Service Plant Near You

In each district of the United States and Canada there is a responsible firm of fence experts that carries complete stock of Page products and specializes in fence construction. This gives the advantage of expert consultation with men of long experience in the planning and erection of fence.

Estimates gladly furnished on receipt of rough sketches of proposed work, or complete detailed designs will be drawn up, if desired, and estimates supplied.

Get in touch with the Page Service Plant nearest you, as listed on the preceding page, or write direct to Association Headquarters for interesting literature.



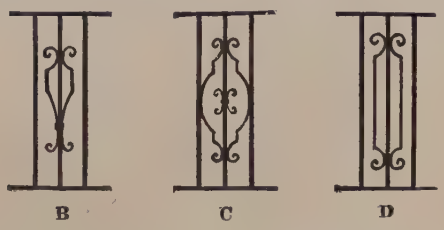
Page Chain Link Enclosures stay taut and trim under severe conditions of backstop service.

PAGE FENCE ASSOCIATION, 215 North Michigan Avenue, Chicago, Ill.

ORNAMENTAL IRON AND WIRE WORK

Made by HAVEN-BUSCH CO.

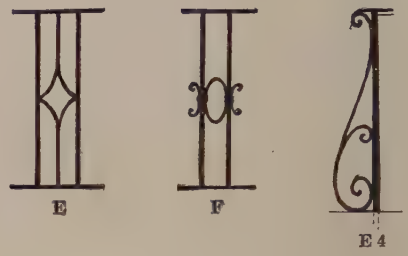
GRAND RAPIDS, MICH.



Stock Panels that Save You Money:

All panels shown are stock designs. You may select any design of scroll ornaments you wish. They are all the same price. When building more than one home you can change designs of scroll ornaments. The height of all stock Panels is 2 ft. 4 in. Vertical bars are ½ in. square electrically welded into 1 in. by ½ in. channel frames top and bottom. Finish heavy coat outside black paint. They are crated and shipped ready to install, including screws and bolts. We also carry a complete line of wire trellises, arbors, lawn border and various items to beautify the lawn. If you have any special problems in iron and steel we would be very glad to assist you. Our Engineering Department is at your service.

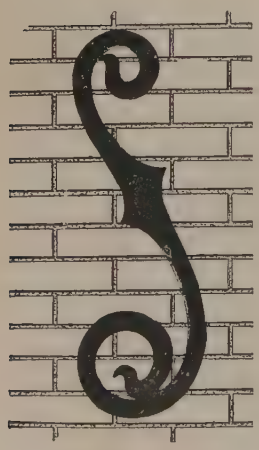
Design B 23. Balcony rails. Complete wrought iron deck is optional or same can be applied to wood decks. Ornamental scrolls for supporting wood or wrought iron decks may be had if desired. Send sketch and dimensions.



Design E 24. Wrought iron rails, assembled units. Design as shown using E 4 scroll post, flat top bar, of wrought iron section. Send sketch and dimensions of conditions for estimating.

Design P 26. Wrought iron rail between columns or piers. Send sketch and dimensions for estimate. Rails can be made of assembled units or special design. Prices will include rail and fasteners complete, ready to erect.

Design E 25. Wrought iron starts at entrance. Special No. 1 size 3 feet out from Building 9 in. curve 42 in. at house 2 feet 8 inches at front carried in stock. You would be agreeably surprised how a little touch of iron work helps resale values.



Design S 22. Assembled stock units for over sun-parlor porches and decks. Estimates will include flat top bar rails of wrought iron, end posts, braces, urns, bolts, and screws to make complete. Send sketch and dimensions for estimates.

CHIMNEY ORNAMENT BEAUTIFIERS

Both Nos. 211 and 215 made of bronze. Will not rust. To give pronounced appearance, ornaments are black finished. Special discounts for quantities. Right, No. 215—Height 25". Price $7.50. Left, No. 211—2' Wide by 11" Deep. Price $18.00.

HAVEN-BUSCH CO., Grand Rapids, Mich.

Ornamental Wire and Iron Work

Manufactured by

STANDARD IRON & WIRE WORKS

Chattanooga, Tenn.

INTERIOR GATES

Other designs of Gates, Rails and Balconies sent on request.

Products

The ornamental iron and wire work usually required in the construction of residences consists of Iron Railings for Porches, Entrance Steps and Stairs, Areas and Balconies. Wrought Iron Entrance Gates and Fences, Cast Iron Coal Chutes, Clean-out Doors, Ash Dumps, Anchors and Window Lintels, Wire Guards, etc.

We make a very complete line of these articles, and on this page give but a few suggestions for porch or balcony railings, gate entrances, etc.

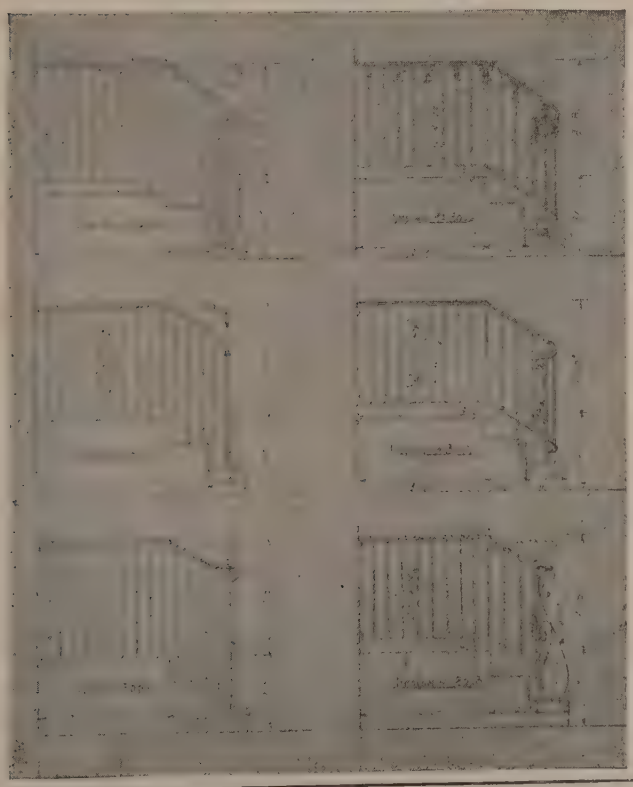
Certain Types of Houses Need Ornamental Iron Work

Colonial, English, Spanish and Italian types of architecture require the use of ornamental iron work such as iron railings, iron balconies, iron window grilles, iron door hardware, iron lanterns, etc., to finish them off, make them more complete, add to their beauty.

While these items do not add greatly to the building costs, they do add very materially to the attractiveness of houses of the type mentioned, and should never be overlooked.

We issue a special folder on Wrought Iron Gates. Balcony and Porch Railings, Iron Balconies, etc., are described and illustrated in Catalog A-21.

IRON RAILS FOR STEPS



IRON BALCONIES

STANDARD IRON & WIRE WORKS, Chattanooga, Tenn.

Planning for home telephone convenience

The placing of facilities for telephone wires and apparatus during construction results in general improvement of residences, in that better appearance is secured by concealing the wires and some of the apparatus; additional telephones when desired can readily be placed at convenient locations; protection is afforded to the wires and apparatus, thereby serving to prevent interruptions to the telephone service; and the service arrangements can be rearranged or enlarged without marring the walls and woodwork.

With the growing appreciation on the part of telephone subscribers of the conveniences to be obtained from adequate telephone service, more telephones are being installed in homes. It is important, therefore, that the facilities provided in the home be adequate for all of the telephones that may be desired, initially as well as in the future.

With the view of laying out the conduit and other facilities required to the best advantage, the telephone company will be glad to co-operate with architects, engineers, builders and owners relative to desirable service arrangements for proposed residences. This consulting service of the telephone company is available without expense and should be particularly valuable to architects and others who are engaged in the design of plans and specifications for sale to home builders.

Conduits, protector cabinets, telephone cabinets or other arrangements for concealing the wires and apparatus are provided by the owner since these facilities, in common with water, gas and electric light conduits and fixtures must necessarily become a permanent part of the building.

Any business office of the telephone company will be glad to arrange for conferences between owners, architects, engineers and builders and the telephone company's representatives with reference to any phase of this matter.

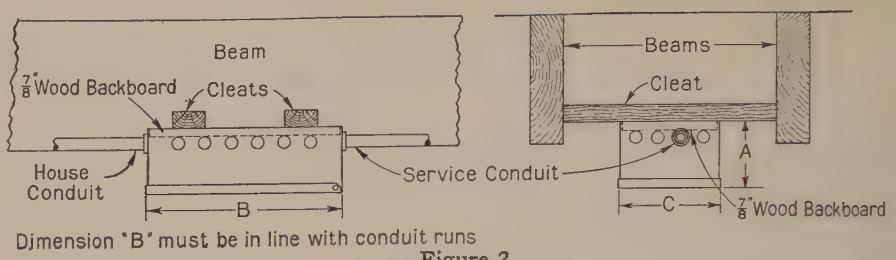


Figure 2
Protector Cabinet mounted between beams

Service Entrances

If the owner desires, and conditions permit, arrangements may be made whereby the telephone company will place its cable in an underground service conduit constructed and maintained at the owner's expense.

Overhead entrances are made in the cellar or basement, except in residences not having cellars. In such cases entrances may be either under the first floor or through the attic, but in either case arrangements must be made for mounting the telephone protector cabinet so that it will be accessible from the outside of the building.

The location of the service entrance should permit as direct a route as possible for the wires from the telephone terminal to the entrance. Where the pole line from which connection will be made is in the rear of the property, service entrances will preferably be at the rear of the house. Where the pole line is in the front of the property, service entrances should be on the side of the house nearest the pole from which the wires will be run. If there is any doubt as to the point from which the wires will run, the telephone company should be consulted before the service entrance is located.

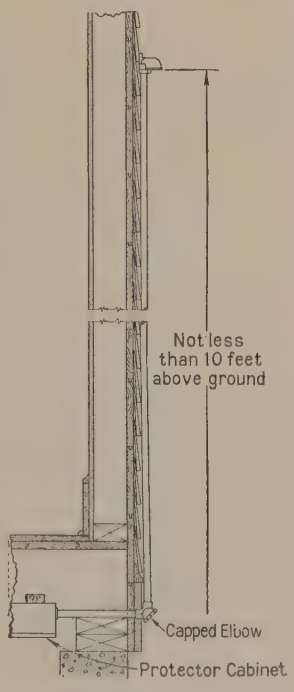


Figure 1
Service Conduit with open cellar ceiling

Service Conduits for Telephone Wires

Conduit should be provided for running the telephone wires from the point of attachment on the house into the building. The telephone company will run its wires through this conduit as required.

Service conduits should conform to the following:

(a) They should be of approved rigid iron conduit having an inside diameter of not less than ½ inch for one pair of wires, ¾ inch for two pairs of wires and 1 inch for three and four pairs of wires. Ends of all conduits should be reamed.

(b) They should be securely fastened to the building. Figure 1 shows a typical installation of a service conduit.

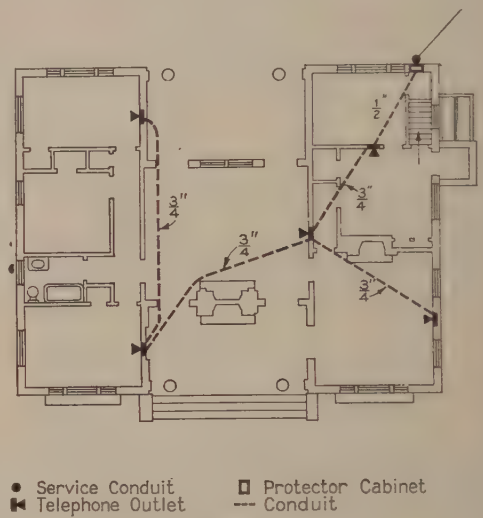


Figure 3
Diagram of possible conduit layout and telephone locations in a typical floor plan

(c) The upper end of the conduit should be not less than 10 feet from the ground and be protected by an approved service head. All conduits should be weatherproof.

(d) They should be permanently and effectively grounded according to the requirements of the National Electrical Code and any local requirements covering the grounding of service conduits.

(e) They should terminate in a protector cabinet placed in the cellar or basement, except in the case of residences not having cellars when the protector cabinet should be placed in the service conduit run.

(f) There should be a clearance of not less than 6 inches between the telephone service conduit and the electric light service conduit.

For further information consult the business office of your local Bell Company

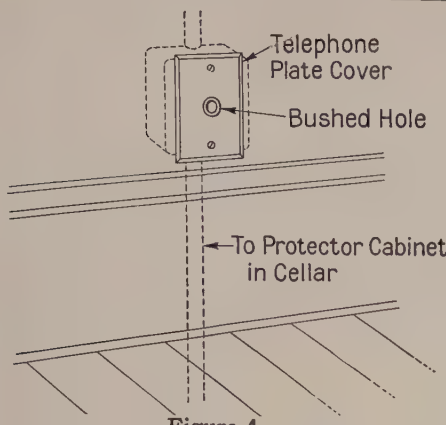


Figure 4

Outlet box for desk or hand set telephones

Telephone Protector Cabinets

Most residences require a protector in the telephone line. It is desirable, therefore, that arrangements be made in connection with the service conduit for the telephone protector. This is accomplished by providing a metal cabinet of suitable size to which the service conduit and the conduit to the telephones are connected. (See Figure 2.)

The protector cabinet should be located as close to the point of entrance as possible and in accordance with the following:

(a) The entrance should be located in a clean, dry and ventilated place. Otherwise the presence of moisture will lower the insulation of the protectors and detract from satisfactory service.

(b) The entrance should be at a point where the protector and wiring will not be subject to injury and where the protector will be accessible at all times. Coal or wood bins, storage rooms or rooms to which access is difficult should not be selected for the point of entrance.

(c) The entrance shall not be in a transformer vault nor in a location where the telephone installers or repairmen or the telephone system will be subjected to contact with the live parts of electric light or power circuits or apparatus.

In bungalows or other residences not having cellars the protector cabinet should be placed in the wall or on the outside of the wall. Details for installing protector cabinets in outside walls are usually furnished by the architect or builder to conform with the type of construction used in the residence. The cabinets should be of non-rusting material provided with hinged doors and so visored or arranged as to keep the protector, placed by the telephone company, dry at all times.

The minimum size of a telephone protector cabinet is 4″ deep by 12″ high by 8″ wide. One protector is required for each telephone line. If more than one line is being installed a larger size cabinet is required.

Conduit for Inside Telephone Wires

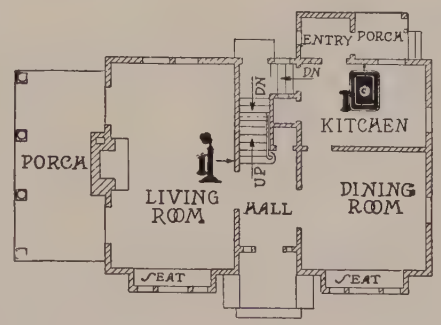
In order to install the conduits for telephone wires while residences are under construction, it is necessary that the locations of the outlets be determined in advance. (See Figure 3.)

Separate iron pipe conduit run from the protector cabinets to the telephone locations should be installed in the same manner as required for electric light installations. Open ends should be plugged during construction of building to prevent the entrance of moisture or foreign material. Ends of conduit should be reamed.

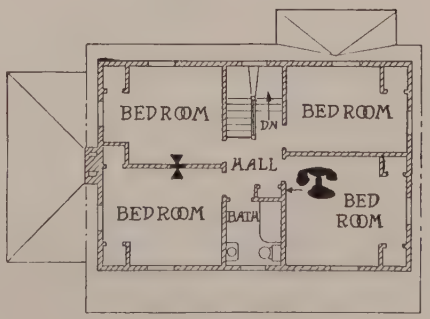
After installation each conduit should be fished and provided with No. 14 galvanized iron pulling-in wire to facilitate the placing of the telephone wires. For the average residence telephone service the following conduits are satisfactory:

Pair or Triple Wire	*Size of Conduit*
1	½ inch
2 and 3	¾ inch
4	1 inch

When more than two 90 degree bends are necessary pull boxes should be installed so that no section will have more than two such bends. If sections exceed 50 feet the next larger size conduit should be used or pull boxes added so that no section between pull boxes will exceed 50 feet. No section of any size conduit should exceed 100 feet.



FIRST FLOOR



SECOND FLOOR

Figure 5

Diagram showing telephone arrangements suggested for an average two-story residence

Outlet Boxes

If a wall box or telephone cabinet is not installed, the run of conduit from the protector cabinet should terminate in an outlet box placed as shown in Figure 4. The telephone company will then place the telephone bell box over the outlet box.

The telephone company will be glad to consult with architects, builders and home owners concerning the location of telephones and the variety of services which are available to meet differing household communication requirements. It may be advisable, for example, to consider the use of additional telephone lines, additional bells, push buttons and switches for intercommunication between the telephones, portable telephones for plugging into jacks located at appropriate places, and many other convenient facilities. In these, and other related matters, the advisory services of the telephone company are available.

In addition, the Bell System is distributing to architects, engineers and builders two booklets entitled "Planning for Home Telephone Convenience" and "Planning for Telephones in Buildings." A call to the business office of your local telephone company will insure the prompt receipt of copies of these booklets and any other data which may be helpful in planning in advance for *built-in* telephone comfort and convenience.

For further information consult the business office of your local Bell Company

Glassware *for* Residential Lighting

Made by

MACBETH-EVANS GLASS COMPANY

DISTRICT OFFICES: *New York* • 19 West 44th St.
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GENERAL OFFICES: Charleroi, Pennsylvania

Products — Shades and globes of Cremax, Golden Antique and Monax, plain and decorated, for use in every room in the house.

Fashion In Lighting Glassware — In selecting lighting equipment for the home, there are two prime factors which must be given careful consideration:

First — The increasing tendency toward the use of shaded light. It is accepted that all light sources should be shaded, and it is of paramount importance that the medium used shall also create artistic and decorative lighting effects. Because of its almost unlimited decorative possibilities, glassware is particularly adaptable for this purpose. In addition, lighting glassware possesses a utilitarian value: its colors are permanent, it is very easily cleaned, and it will not deteriorate from constant use.

Second — The introduction of new type inside-frosted Mazda lamps has rendered obsolete many existing types of residential lighting glassware. This has made necessary the preparation of new shapes by means of which these new lamps can be shaded both adequately and artistically.

Designs of lighting glassware shown on the opposite page reflect an authentic tendency toward vivid coloring in home decoration. Modern in style, they are neither bizarre nor so extreme that they may become tiresome in the ordinary period of use. The quality of light and its efficiency have in no instance been sacrificed for decoration. Each type of residential lighting equipment has been so designed that in use it will enhance the decorative scheme for which it may be selected and when lighted will present that restful quality of light so necessary for adequate home illumination.

In the making of Macbeth glassware for residential lighting, great care has been exercised in selecting glass of proper texture as a background for the applied decorations:

Cremax Glass — so named because of its rich, cream tint, is especially adapted to artistic decorative effects, where restful and colorful illumination is the prime requisite.

Cremax Cased Glass — represents the latest achievement of Macbeth laboratory research. The return to popularity of semi-indirect lighting demanded a glass combining modified diffusion and strong upward reflection. A lining of special reflecting Opal with an outer casing of CREMAX results in an ideal glass for this type of illumination. Applications have been made covering fully the basic claims for patents on CREMAX and CREMAX CASED glass.

Golden Antique Glass — procures its unusual character during manufacture rather than from an applied finish. It is a natural colored glass and thus insured against the possibility of fading when used for exterior lighting.

Monax Glass — is truly a remarkable diffusing glass which transforms the uncomfortable brilliancy of high-powered lamps into usable and evenly diffused illumination. It lends itself readily to decorative treatment.

Lamps — Five Mazda lamps now replace approximately forty-five shapes formerly considered necessary to satisfy general lighting requirements. These lamps, frosted inside, may be secured in the following sizes: twenty-five, forty, fifty, sixty and one hundred-watts. Each Macbeth shade and globe is scientifically designed to accommodate one of these sizes. Your dealer will recommend the proper size to use in order to obtain proper diffusion and proper effect.

Prices, etc. — The shapes and decorations here illustrated constitute but a small portion of the complete Macbeth line. Any Macbeth dealer will gladly show you other styles to suit your individual purpose. Not only is there a shade or globe to harmonize with every scheme of decoration, but prices are so graded as to come within the means of every home owner. If your dealer does not carry Macbeth glassware in stock, please communicate with us direct.

For further details and literature, write to:

Department R — MACBETH-EVANS GLASS COMPANY — CHARLEROI, PENNA.

BREAKFAST NOOK-SOLARIUM

HALLWAY

ENTRY-PORCH

Above Cremax Lanterns 4253 AD 133 and 4454 J 86

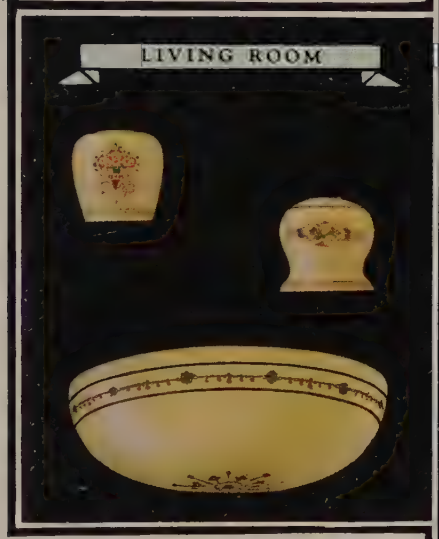
Above Right Cremax Shade 5018 D 131 and Monax Globe 5151 D 122

Above Golden Antique Lantern 4262 D 120
Golden 4318 D 120

Below Cremax Antique Iridescent Shade 4534
Golden Antique Shade 5389 D 115
Cremax Bowl 5012 D 121

BEDROOM

LIVING ROOM



DINING ROOM

Above Cremax Shades 5389 D 133 and 5660 D 124
Cremax Bowl 5012 K 300

Right Center Cremax Shade—2187 D 130
Monax Globe—5881 D 128
Cremax Shade—4480 D 130
Cremax Globe—5257 D 130

Below, Left to Right Cremax Shade 4221 D 121
Cremax Globe 5257 K 298
Monax Globe 5257 D 56
Monax Shade 4221 D 56

Your Electrical Dealer will show you additional patterns

KITCHEN-BATHROOM

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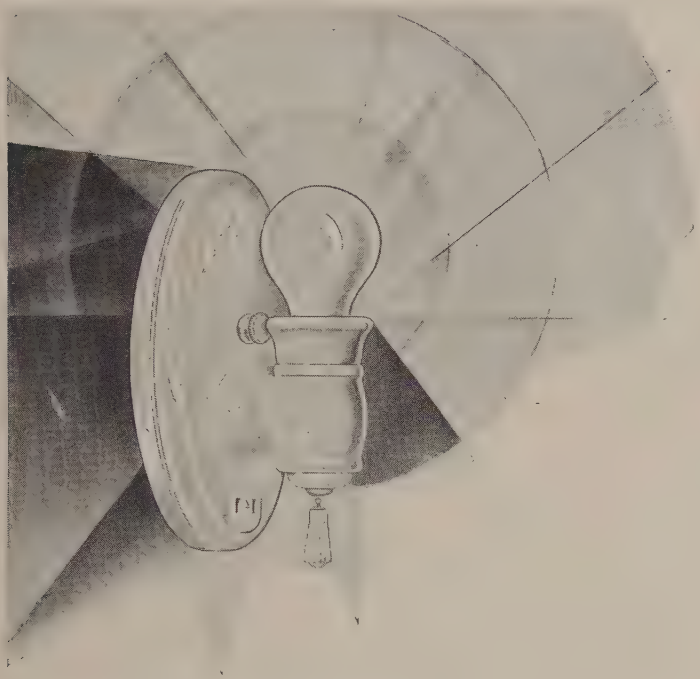


P&S
Reg. U. S. Pat. Off.

TAKE any *P & S Alabax* ceiling receptacle or sidewall bracket and notice the pure white, flawless composition of the porcelain. Notice, too, its fineness and firmness of texture. Here lie the secrets of the long-wearing qualities of *P & S Alabax* Lighting Fixtures.

Made from the finest porcelain clay by a special P & S process, rugged strength and durability are "fired" into all *P & S Alabax* fixtures. Their rich, beautiful lustre is as lasting as the fixtures themselves. They will not stain, rust, chip or peel. Nor will time, heat or moisture affect them. And they are easily cleaned to spotless newness by rubbing with a damp cloth.

P & S Alabax fixtures add attractiveness to the decorations of new homes or old. To satisfy the modern taste for color, all units are furnished in plain white, or in a variety of lovely pastel shades and color stripings.

P & S Alabax lighting fixtures may be obtained ready for immediate installation. To allow the purchaser to select according to his own dictates of taste, glassware is not furnished.

P & S Alabax fixtures are safe, too—proof against short circuiting and other fire hazards caused by defective electric units. No safer material is known for electrical devices than non-conducting porcelain.

P & S Alabax lighting units are approved by the National Board of Fire Underwriters and meet all the requirements of the National Electric Code.

Send for our four-page folder showing in full colors, the complete line of P & S Alabax *porcelain fixtures. We shall appreciate your giving the name and address of your electrical dealer or contractor.*

"Those Who Know the Facts, Insist on Alabax"

PASS & SEYMOUR, INC., Solvay Station, Syracuse, N. Y.

"BUFFALO BREEZO" Home Ventilating Fans

Also Manufacturers of Complete Line of Ventilating and Exhaust Fans in Larger Sizes

Manufactured by BUFFALO FORGE COMPANY

479 Broadway, Buffalo, New York

In Canada, Canadian Blower Forge Co., Ltd., Kitchener, Ontario

Buffalo Breezo Fans
Buffalo Coal Burners
Buffalo Furnace Fans

Home Ventilation of Vital Importance

The status of "home ventilation" has so changed in the last three or four years, due to better understanding of its importance, that today it is recognized as a health, comfort, social and economic necessity.

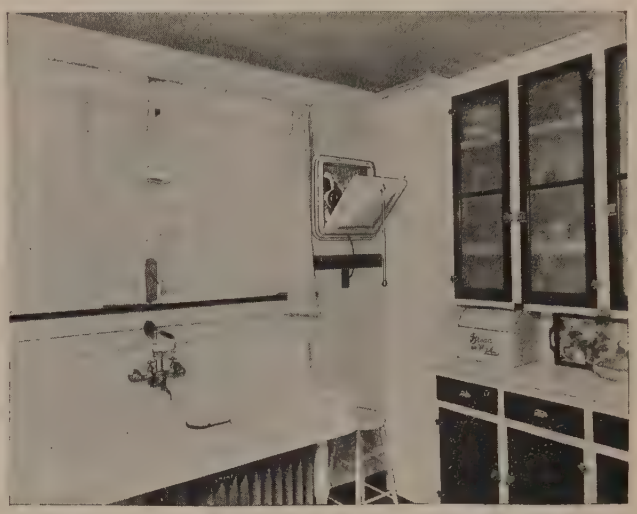
With a built-in BREEZO Ventilating Fan installed in the kitchen the housewife or cook will not suffer from the heat which ordinarily saps the strength and ruins the disposition. Cooking, ironing and other kitchen duties become pleasures instead of tasks. Kitchen odors, greasy steam and smoke are removed quickly from the kitchen, saving embarrassment and annoyance to hostess and guests and protecting and prolonging the life of furniture, draperies and walls.

The home ventilating fan is as important to the kitchen of the modern home as the shower to the bathroom. You will want one—install now while you are building. Partial details given on this page but complete data sent on request.

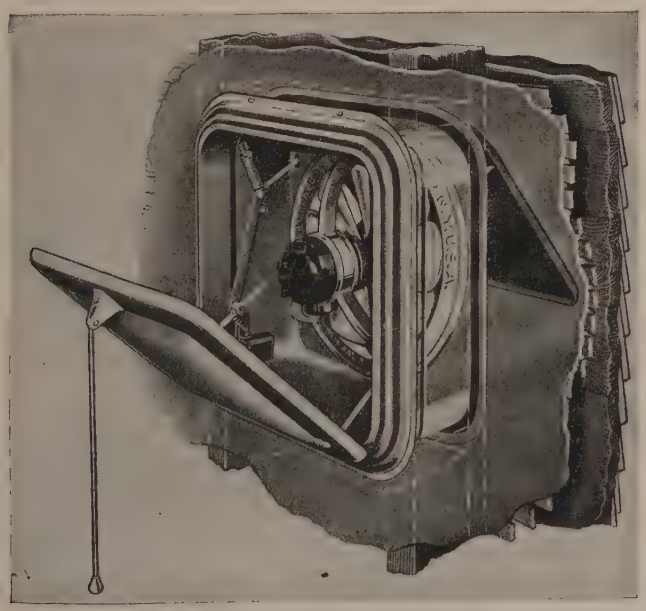
Buffalo Breezo Wall Box Unit

The phantom view shows the Buffalo Breezo Wall Box Unit for built-in construction in homes or apartments. Fan is automatically operated, a slight pull on the handle in the kitchen opens both inner and outer doors, and starts the 12" Breezo fan, which whisks kitchen odors out-of-doors. When the box is closed, the fan automatically stops. Space here is too limited to fully describe the construction of fan and box, but briefly, the wall box is all steel, fully adjustable to fit walls of various thicknesses, neat in appearance, and so constructed that it is impossible for doors or any other part to rattle or vibrate. Motors are large enough to handle full capacity easily and the whole unit is QUIET in operation.

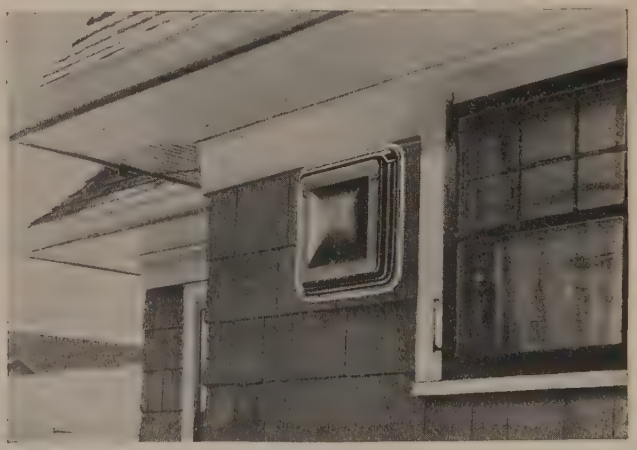
Follow the specification given here in your plans: Furnish and install where shown on plans, one Buffalo Home Ventilating Wall Box. Provide an opening in the wall 16⅜" square. Enclosed type motor to be supplied suitable for operating on current available. Exterior metal to be of Black Steel. Box to be finished white enamel inside building. Operating rod to be of sufficient length and properly located so the wall box may be easily and conveniently operated from the floor.



With this fan in operation, cooking odors vanish as fast as they come from the stove. When fan is stopped louvers are closed tightly.



Phantom view showing Wall Box installed in frame dwelling. Very little work required to set in place. Interior finish is white enamel, exterior, black enamel.



Outside, the Wall Box Shutter is finished in black enamel. Tight construction of box and louvers prevents cold air from entering in the winter.

BUFFALO FORGE COMPANY, 479 Broadway, Buffalo, New York

General Electric Wiring System

Consisting Entirely of Wiring Materials Manufactured by

GENERAL ELECTRIC COMPANY

Merchandise Department, Bridgeport, Conn.

HOW TO PLAN WIRING

The G-E Wiring System has been developed in order that you may be assured of quality materials properly arranged and assembled without the necessity of writing detailed specifications covering a wide variety of products.

The G-E Wiring System is a system of housewiring embodying adequate outlets, conveniently controlled and using G-E materials throughout.

It Consists of the Following Elements:

A G-E Safety Meter Service Switch.

A G-E Safety Panelboard.

A G-E Bell Ringer.

G-E Code Wire.

G-E Metal-covered Conductors (BX or Rigid Conduit).

G-E Metal Boxes for Switches, Convenience Outlets and Lighting Outlets.

G-E Tumbler Switches.

G-E Convenience Outlets.

The following standards of adequacy are based on an analysis of a large number of adequately wired homes. If they seem to exceed present practice it should be remembered that—

(1) Even those who have long been users of electricity are increasing their consumption at an average of nearly ten per cent each year.

(2) A house is purchased for use over a long period of years. Houses built five years ago are totally inadequate in the matter of wiring today.

(3) A complete nationally advertised wiring installation adds much more to the **value** of a house than the cost of installation. Some six million people have shown the truth of this statement by their attendance at Electrical Homes in various parts of the country. To the best of our knowledge, every one of these homes has been sold at or before the conclusion of the showing for a price well in advance of the normal price plus the cost of the additional wiring which they featured.

The standards of Adequacy are:

A Tumbler Switch accessible to each doorway for control of lights.

A minimum of one convenience outlet for every 50 square feet of floor space.

A minimum of one lighting outlet for every 50 square feet of floor space.

To plan the wiring it is simply necessary to indicate on the room plans of your house the necessary switches and outlets, following the above standards as a guide.

The following typical layouts will aid you in arrangement. The symbols used have been standardized and should be followed in order that the electrical contractor may easily interpret your instructions.

GENERAL ELECTRIC CO., Merchandise Department, Bridgeport, Conn.

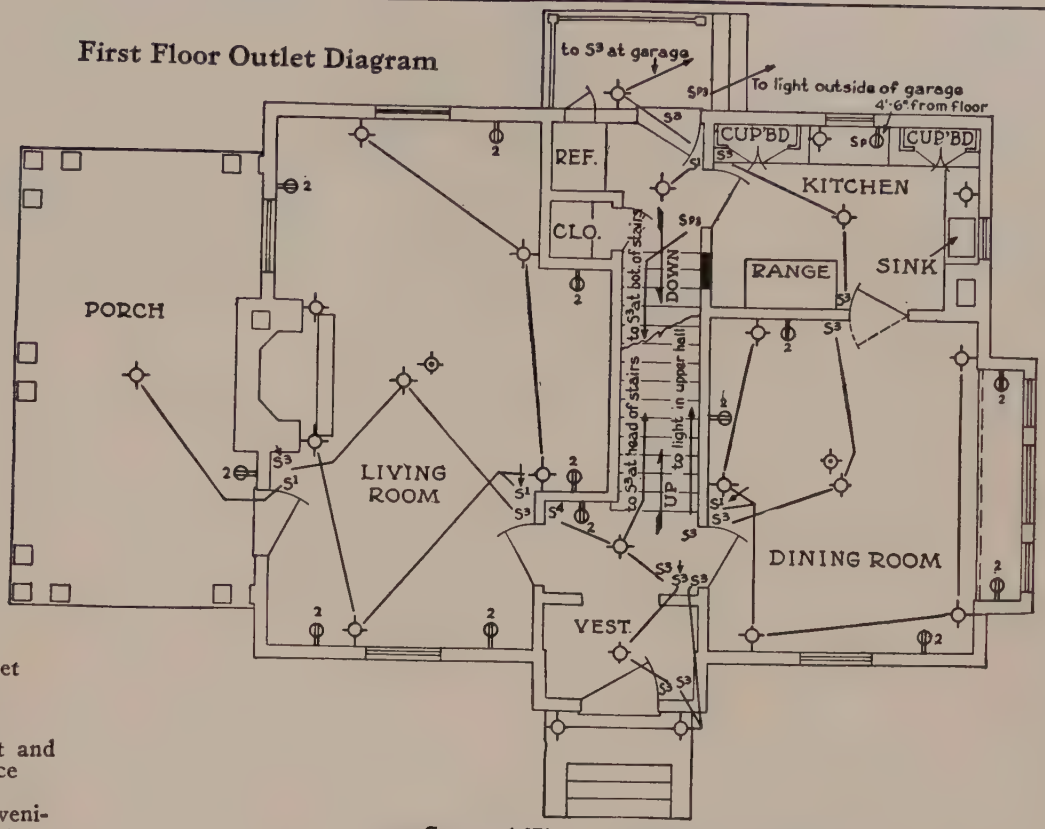
General Electric Wiring System

Consisting Entirely of Wiring Materials Manufactured by

GENERAL ELECTRIC COMPANY

Merchandise Department, BRIDGEPORT, CONN.

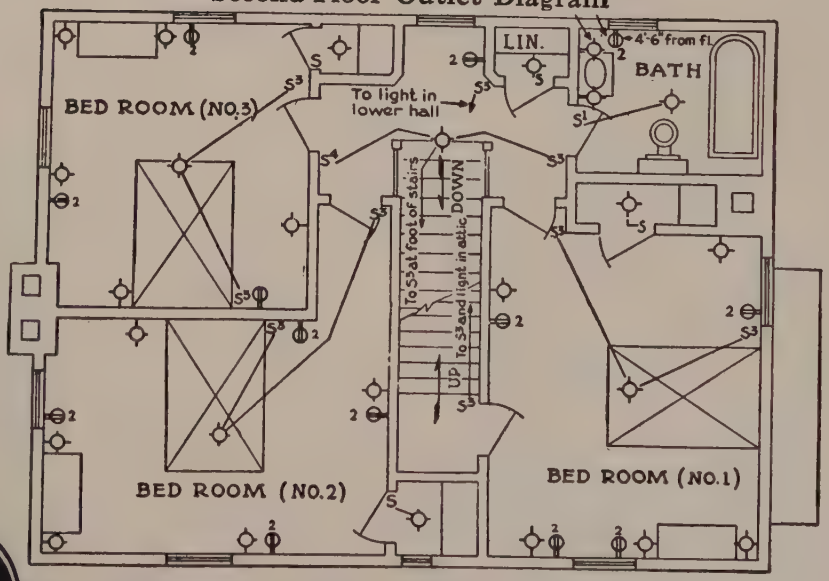
First Floor Outlet Diagram



KEY

- = Ceiling Outlet
- = Wall Outlet
- S^{P3} = Switch, Pilot and Convenience Outlet
- $\ominus_2$ = Double Convenience Outlet
- = Floor Outlet
- = Panelboard
- S^1 = Single-pole Tumbler Switch
- S^3 = Three-way Tumbler Switch
- S^4 = Four-way Tumbler Switch
- S^{P3} = Three-way Tumbler Switch and Pilot
- S^P = Tumbler Switch and Pilot

Second Floor Outlet Diagram



Send for a copy of our helpful booklet, "The Home of a Hundred Comforts."

WIRING SYSTEM

—for lifetime service

GENERAL ELECTRIC CO., Merchandise Department, Bridgeport, Conn.

WESTINGHOUSE ELECTRIC & MFG. CO.

Offices in over 110 Cities in the United States

The Stores That Bear This Sign Make Electricity Your Servant

This is the sign of a Westinghouse Electrification Dealer.

Through the store that displays it, you can secure complete electrical service, from the wiring that carries electric current to the devices that turn it into useful light, heat, and power.

The homes you are building can have electrical equipment of the same quality, reliability, and sound engineering design, as that installed in skyscrapers, industrial structures, and public buildings. Westinghouse, the organization that designed and manufactured the electrical equipment for such buildings as the world's largest hotel, The Stevens in Chicago, the Fisher Building in Detroit, the Koppers Building in Pittsburgh, Oliver Cromwell Apartments in New York, Wardell Apartments in Detroit, Cathedral Apartments in San Francisco and many others, supplies a full line of equipment for home electrification.

Other conveniences for the home which Westinghouse manufactures and has for sale through these channels are:
Automatic Irons
Automatic Percolators
Automatic Ranges
Automatic Toasters
Cozy Glow Heaters
Solar Glow Heaters
Water Heaters
Curling Irons
Waffle Irons
Warming Pads
Lighting Units
Panelboards
Rectigon Battery Chargers
Safety Switches

The Westinghouse Electrification Dealer is the distribution outlet of this great organization. Whatever your electrical need—a wiring installation, lamps or lighting equipment, household appliances, motors and control—you will find the answer to that need where you see the sign of a Westinghouse Electrification Dealer. You can depend on the equipment he sells.

For reliable electrical goods and reliable electrical service, buy from the nearest Electrification Dealer.

Westinghouse Electric Ranges

With the Automatic "Flavor Zone" Oven

It is a proven fact that the Westinghouse, with its unique Flavor Zone oven, is the only range that makes it possible to duplicate the best results of any other cooking method without anyone being in the kitchen at any time during the browning and roasting process.

By the simple act of setting a clock and a thermometer before she leaves, it is possible for a woman to have a delicious oven dinner ready to serve immediately upon her return from an afternoon or a whole day of freedom.

The certainty and precision of Flavor Zone Cooking is a marvel to women. It doesn't take long to convince them that no other method will enable them to repeat their best results so exactly, so scientifically and so invariably.

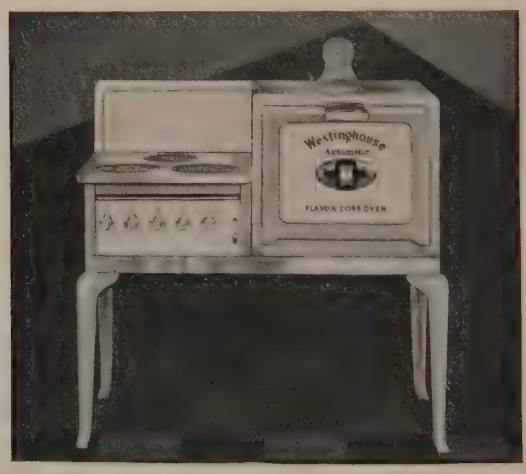
Over and above its incomparable cooking results, a Westinghouse Electric Range has many other features to recommend it. Each model is available with either a right or left-hand oven. The Junior Console is also furnished in shades of light green, rich ivory or soft blue in addition to the standard grey, semi-white and black.

Every model has the grace of line and the beautiful finish of a fine piece of furniture. The introduction of a Westinghouse Range into the kitchen opens up new possibilities for convenient arrangement and harmonious decoration. New home builders, particularly, find these ranges admirably in keeping with their plans.

Because Flavor Zone Cooking is done by electricity there is no annoying smoke, dirt or fumes. The kitchen is not only cleaner but more healthful. In short, it becomes a far more attractive spot in which to spend the few short hours required to cook by this safe, economical modern method.

The Junior Console In Semi-White—An amazingly compact range admirably adapted for the cooking requirements of a family of five or six. Has the new oven door thermostat and all other features of the largest ranges. Furnished in grey enamel as well as semi-white for full automatic or automatic operation. Non-automatic operation, in black Japan.

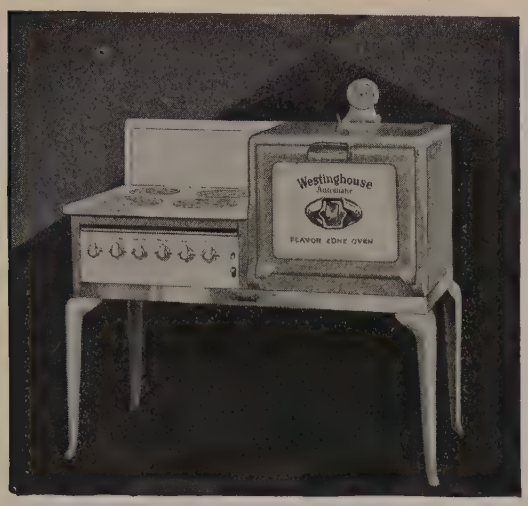
Floor space—38½ inches wide by 27½ inches deep.
Height—47 inches.
Oven size—14 inches by 14 inches by 17½ inches deep.
Height of cooking platform—32½ inches.
Size of cooking platform—20½ inches wide by 24 inches deep.



The Console In Grey Enamel—Similar to the Junior Console, except for its greater oven capacity. A beautifully designed and constructed range, combining all the convenience and cleanliness of electric cooking with marked economy of effort, time and food. Furnished also in semi-white finish for either full automatic or automatic operation.

Floor space—43½ inches wide by 27½ inches deep.
Height 48 inches.
Oven size—18 inches by 15 inches by 17½ inches deep.
Height of cooking platform—32½ inches.
Size of cooking platform—20½ inches wide by 24 inches deep.

Westinghouse Electric Ranges—*Continued*



The Senior Console—in Grey Enamel

The Senior Console—In Grey Enamel—While the design and appearance of this range are much like the Console model, it has the advantage of four surface units which, in combination with its large oven, make it especially suitable where cooking requirements are heavy. Furnished also in semi-white enamel for full automatic operation.

Floor space—47 inches wide by 27½ inches deep.

Height—48 inches.

Oven size—18 inches by 15 inches by 17½ inches deep.

Height of cooking platform—32½ inches.

Size of cooking platform—24 inches wide by 24 inches deep.

The Cabinet Royale—Chromium Plated—The ultimate in convenience and luxury, this new Westinghouse Range can be had with the Lowboy Cabinet base; equipped with a percolator, mirror, platform light, shaker set, towel rack and utensil compartment or with legs without the utensil compartment.

The Cabinet Royale—Chromium Plated

Position of Range Outlets*

Type	Wiring Outlet Ht. from Floor Inches	Distance from End Opposite Oven Inches
Junior Console	24	9½
Console	24	9½
Senior Console	24	11½
Console Fuel-Electric	26	24
Junior Console Fuel-Electric	26	24

*The wiring outlets are always on the back near the opposite end from the oven.

Westinghouse Electric Fans for the Home

A Complete Line—Westinghouse makes a complete line of desk and bracket fans for domestic use. These fans in 8, 10, 12 and 16-inch sizes are available in oscillating and non-oscillating models. The 8-inch fan is single speed; the larger fans are three speed, controlled by a switch in the base. Standard finish is black.

The Home Fan

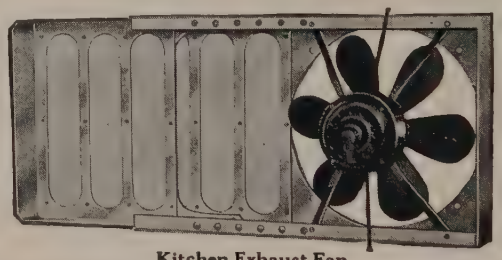
The Home Fan—This splendid 10-inch Home Fan in satin black or ivory and nickel is in keeping with the other appointments in the finest residence. Special finishes are obtainable on special order. It is light enough to be carried from room to room and used wherever its breeze is desired.

Noiseless in operation, three speed, oscillating or non-oscillating.

The Kitchen Exhaust Fan—This fan will force smoke and objectionable odors from the room in which it is installed or will draw the invigorating outside air into the room, if desired.

The frame has translucent panels which improve the appearance of the unit and allow a maximum amount of sunlight to enter.

The fan, which is 12 inches in diameter is in a steel frame that can be inserted directly on the window frame. This frame is adjustable and in the two sizes offered, any window up to 50 inches wide can be equipped. No sawing or cutting of woodwork is required and a screw driver is the only tool needed to mount the fan in the window frame.



Kitchen Exhaust Fan

For further information refer to the Westinghouse Fan Catalog, 286.

Westinghouse Kitchen Lighting Units

Sol-Lux Kitchen Unit

The Sol-Lux Kitchen Unit—The Sol-Lux Kitchen Unit has a white enameled hanger, equipped with a 10-inch Sol-Lux globe. This globe is attached to the hanger by the "keeper ring" method of globe support which makes it dust-proof and bug-proof and helps to minimize globe breakage. By means of the convenient tilt-out cap the unit can be cleaned inside and out, and relamped, without removing the globe from the hanger.

The Sollaire Kitchen Unit—This unit is very similar to the Sol-Lux Kitchen Unit in appearance and in its efficiency of light distribution. Certain Sol-Lux features have been eliminated to bring the cost down.

The hanger is white enameled and can be equipped with 8, 10 or 12-inch Sollaire globes.

For further information see the Westinghouse Lighting Catalog No. 288-B.

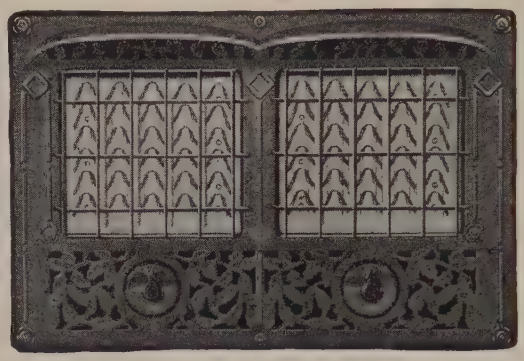
Sollaire Kitchen Unit

Westinghouse Solar Glow Air Heaters

Solar Glow Air Heaters—The new styles of Westinghouse Wall-type Solar Glows, in double and single units and in bronze and white enamel finishes, make possible the application of these heaters to any room in the modern home. For the bathroom, the Solar Glow is finished in white enamel. For bed and living room application, it is finished in attractive antique bronze.

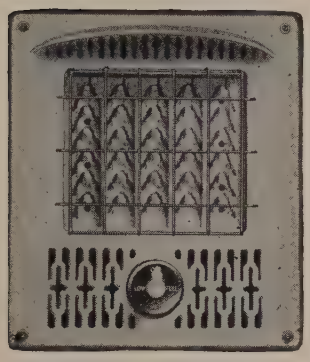
Because of the principle of its operation, the Solar Glow is effective for heating rooms in the home. Hot air currents set up by the passage of air through the grates and over the back of heating unit carry the heat to all parts of the room and thus raise the average temperature.

In addition, radiant heat is thrown directly to the front from the element and the porcelain brick in which it is mounted. Thus the advantages of the central heating plant method of operation are combined with those of the small portable radiant type heater.



3-Heat Double Unit—Bronze

SPECIFICATIONS



3-Heat Single Unit—White Enamel

Single Unit

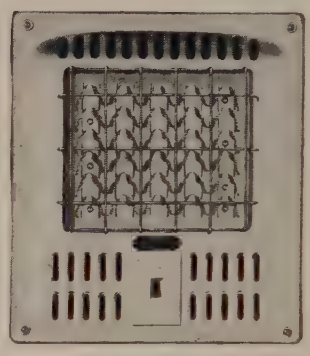
	Watt-age	Style No. 110 volts	Style No. 220 volts	List Price
One-heat Complete Heater...	1200	395759	395760	$25.00
Three-heat Heater Unit complete with Switch...	1500	470820	470821	14.00
	1750	470822	470823	15.00
Sheet Metal Wall Box...		497480		3.50
White Enameled Frame..		497483		10.00

Total maximum input: 1200, 1500 or 1750 watts. *Overall dimensions:* 15 inches wide, 17½ inches high, 4 15/16 inches deep. *Shipping weights:* One-heat, 30 pounds; three-heat, heater unit, 10 pounds; wall box, 6 pounds; frame, 14 pounds. *Standard package:* One-heat, one complete heater; Three-heat, heating unit, one; wall box, one; frame, one.

Double Unit

	Watt-age	Style No. 110 volts	Style No. 220 volts	List Price
Heater Unit complete with Switch (2 units required).	1500	470820	470821	$14.00
	1750	470822	470823	15.00
Sheet Metal Wall Box....		497481		7.00
White Enameled Frame..		497485		20.00

Total maximum input: 3000 or 3500 watts. *Overall dimensions:* 26¼ inches wide, 17½ inches high, 4 15/16 inches deep. *Shipping weights:* Heater units, 10 pounds each; wall box, 12 pounds; frame, 25 pounds. *Standard package:* Heater unit, one; wall box, one; frame, one.



1-Heat Single Unit—White Enamel

Westinghouse Automatic Heaters

Electric Water Heater Complete Tank

Westinghouse Automatic Household Water Tank—Complete with element and thermostat. Consists of a 20-gallon boiler, insulated with mineral wool 3 inches around the tank and 5 inches at the top, the point where the radiation losses are the greatest. A "U" trap is placed in both hot and cold-water lines within the insulation, thus lessening the radiation losses due to the backing up of the water.

A Spencer "Klixon" Thermostat, controlled by a snap switch, provides the choice of three distinct water temperatures, 180, 155 and 135.

The heater is surrounded by a 2-inch pipe which extends almost to the top of the boiler, thereby assuring a small amount of hot water quickly.

Specifications

Tank Capacity—20 gallons.
Wattage—3 Kw. 120 or 240 volts.
Overall Height—71¾ inches.
Floor Space Required—19x19 inches.

Westinghouse Type DX Electric Water Heaters—These immersion heaters are especially designed for use on continuous service. No switches are provided, but a simple drawn-steel condulet box covers the terminals. This box is provided with knock-outs so that the heater can be easily connected to the line.

These heaters are particularly adaptable for use with large storage tanks, heavily insulated, where speed in the initial heating time or recovery is not required. In this case, the heater should be mounted near the bottom of the tank.

Style No.	Specifications Watts	Volts	Tube Length Inches
DX 4	600	120	9 13/16
DX 8	600	240	9 13/16
DX 14	750	120	9 13/16
DX 18	750	240	9 13/16
DX 24	1000	120	9 13/16
DX 28	1000	240	9 13/16

NOTE:—Casings may be procured for all DX type heaters at a slightly increased cost.

Electric Water Heater Element Type DX

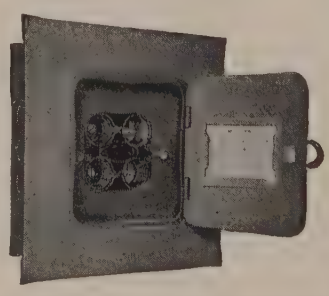
Westinghouse Panels and Panelboards

Residence Panelboards—Westinghouse Small Residence Panelboards meet the requirements for the control of lighting circuits in residences, apartments and stores.

These panelboards are made for 125–250-volt, three-wire service and for 125-volt, two-wire service.

Junior Residence Panels—These panels come for flush and surface type mounting in sizes from 2 to 12 circuits. The box and trim are self-aligning. The trim is finished in gray; the box is galvanized. Plenty of convenient knock-outs are provided.

Junior Building Panels—These panels are equipped with switch plates provided with rectangular knock-outs for the standard makes of toggle switches. They are available for flush or surface mounting in sizes of from 4 to 12 circuits. The trim is finished in gray. The box is galvanized.



Type R and NR Panelboards—Type R and NR Panelboards are strongly built with rugged steel box flanged and riveted at the corners. They are flush type, in sizes of from 4 to 12 circuits with plenty of convenient, easily removed knock-outs.

The branch circuit units of type R and NR Panelboards are mounted on slotted steel reinforcing straps which makes it easy to remove and replace the panel in the box. This makes it possible to install the box when the building is being roughed in and leave the mounting of the panel until the wires have been pulled and it is desired to connect the circuits to the line.

For further information refer to the Westinghouse Safety Switch Catalog No. 282.

PANELBOARDS FOR THE HOME

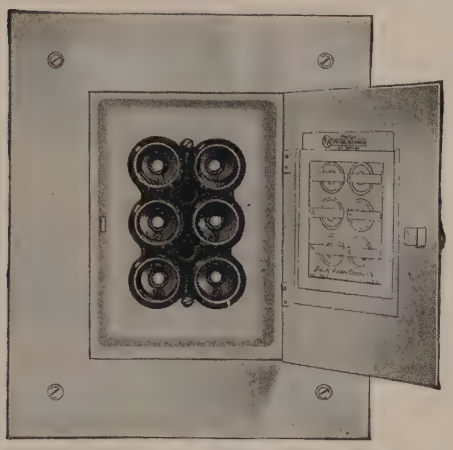
The Sign of a Better Job

Manufactured by

Frank Adam
ELECTRIC COMPANY
ST. LOUIS

Look for the Trade Mark

THE NEW Ⓕ FUSEBOX



Ⓕ FUSEBOX
Type FBX

This is a low price unit for small homes and is thoroughly efficient. Made in 2 fuse 2 wire main and 1 fuse 3 wire main. Finished white enamel front, galvanized box. Has 1½ inch gutter, composition sections and other Ⓕ Features. Safety Type.

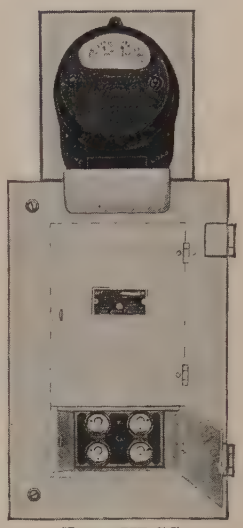
There are many types of Ⓕ Fuseboxes or Panelboards. Each one is made to fulfill a specific duty and there is an Ⓕ Fusebox or Panelboard for every type of duty. This is well to know, for not all homes are the same size nor of the same construction. It is, therefore, unreasonable to expect one type of Fusebox or Panelboard to serve every home owner. Your home needs one particular Fusebox or Panelboard. This exact Fusebox or Panelboard is to be found in the Ⓕ line. To choose it you need the booklet "Wiring the Home for Comfort and Convenience." Send for it without obligations—study it and then talk matters over with your Architect or Electrical Contractor.

How the Fuse Safeguards Your Electrical Work

The fuse is the connecting link between two electrical circuits. There are fuses that connect the wiring in the individual rooms, hallways, etc., of your home with your main "house" circuit. The fuses safeguard your electrical wiring and protect it from mishaps at a very small cost to you.

The Fusebox or Panelboard

Of course, there must be a place in your home where fuses are kept in a handy location. This is the Fusebox or Panelboard. It should be conveniently located and entirely safe even for children to handle. You are always safe in selecting an Ⓕ Fusebox or Panelboard because they are made under the most stringent supervision, in a factory equipped for making all parts safe.



Type NRSS
The Ⓕ Safety Type "NRSS" Panelboard provides for complete meter equipment with its other features.

Ⓕ PANELBOARD—Types R and NR
This is the Ⓕ Safety Panelboard Type "R" showing the simple method of replacing fuses.
Type NR has the copper neutral and where permitted requires only one fuse per circuit.

Things to remember in choosing your fusebox or panelboard. First of all—buy for permanency. It may cost a few dollars more to buy a standardized Panelboard, but when you buy one "made on the job" the first cost is not your last one. Choose a Panelboard with safety guaranteed by its manufacturer.

Consult with your Architect or Electrical Contractor to decide upon the type your home needs—but, above all, insist upon the trademark. Remember the booklet "Wiring the Home for Comfort and Convenience" is yours free for the asking.

FRANK ADAM ELECTRIC CO., Dept. O, St. Louis, Missouri

ANACONDA COPPER, BRASS and BRONZE

Eliminate Costly Repairs and Replacements

. . . by using Anaconda Brass Pipe, Copper leaders and gutters, Bronze screens and solid Brass or Bronze hardware in your home. Copper and its alloys, brass and bronze, cannot rust. They are economical because they last indefinitely.

IF iron or steel pipe is used for water lines in your house, rust will inevitably develop. You may think that the water pressure is weak, whereas the real trouble lies in the fact that rust has clogged the pipe and reduced the flow. Discolored and uninviting water is further evidence of what sanitary engineers call the "red plague."

Some householders call in a plumber at this stage to have the rusty pipe replaced. Others delay until rust has completely clogged the pipe or eaten through to cause damaging leaks.

You will never have such annoyance or expense if you install Anaconda Brass Pipe for hot and cold water lines. Anaconda Brass Pipe *cannot* rust and discolor the water—*cannot* clog with rust deposits to reduce the flow—*cannot* rust through and leak. It will last in perfect condition, indefinitely.

Yet Anaconda Brass Pipe is not expensive. It can be installed in the average eight-room house for about $75 more than rustable pipe.

It is conservative to say that in order to provide water service at all comparable to that which is assured by the use of Anaconda Brass Pipe, it would be necessary to replace iron or steel pipe at least every fourteen years.

To install iron pipe in the average eight-room house, and then rip it out when rust-clogged, would cost at least $1,000 more than Anaconda Brass Pipe over a period of thirty-five years. This means that Anaconda Brass Pipe saves about $31 yearly, in addition to assuring a plentiful supply of clear, clean water.

Brass pipe for hot and cold water lines is no longer the exception—it is the rule in well built houses all over the country.

Anaconda Brass Pipe is carried in stock by leading plumbing supply houses in every locality. The name ANACONDA is stamped in the metal every twelve inches for permanent identification.

* * *

Anaconda Copper used for gutters, rain-pipes and flashings, likewise saves upkeep and repair expense.

When iron or steel is used for the rain disposal system of a house, it is sure to rust and to require repairs and replacements. Coating or painting can do no more than delay the ravages of rust. 6,069 sheet metal contractors from all sections of the country have told us that the average life of rustable gutters, rain-pipes and flashings is 6.7 years.

Copper sheet metal work, which requires no painting or upkeep costs whatsoever, saves the owner of an eight-room house an average of $24 a year, as compared with the cost of maintaining and replacing gutters, rain-pipes and flashings of rustable metal.

Anaconda Copper may be identified by the stamped-in trade-mark. Sheet metal contractors everywhere can supply this time-tested metal.

* * *

In screens, also, Anaconda Bronze proves its economy. The fine wire of which screening is made is an easy prey to rust if iron or steel is used. Painting is costly and bothersome, fills the mesh so that the screens are hard to see through, and is only temporarily effective in preventing rust. The cost of replacement is high because the labor of framing screens represents a large part of the expense.

THE AMERICAN BRASS COMPANY, General Offices, Waterbury, Conn.

ANACONDA COPPER, BRASS and BRONZE

Anaconda Bronze is strengthened copper. That is why bronze screens are not only rust-proof, but are strong and will not sag or bulge.

Brass or bronze likewise proves economical for the hardware of the home.

No one knows how long copper gutters and rain-pipes will last—150 years is not unusual. These people are admiring the original copper installation on an old Philadelphia house built in 1798.

Hardware made of steel, brass-washed or plated, is sure to rust when the thin plating wears off, and rust stains will then mar the woodwork. In cheaply constructed houses it is not at all unusual to see rust stains marring the woodwork even before the house has been occupied.

For lasting satisfaction — and economy—it is advisable to select solid brass or bronze hardware, for it will remain beautiful and serviceable as long as the house stands.

Today, more than ever before, the use of permanent materials is a sound investment for the home owner. With the higher cost of labor, the building dollar is best conserved when labor is given dependable and permanent materials to work with—for then this cost is incurred but once. Make your building dollar do its utmost. Free yourself of the "third mortgage" of repairs and replacements due to rust.

The cost of rust in American homes is over three times as great as the fire loss. Figures from all sections of the country show that it costs about $62 a year in the average seven or eight room house to maintain rustable water pipe, metal work and screens. This expense and the annoyance and damage caused by metal failures is entirely eliminated with Anaconda Copper, Brass and Bronze—metals that cannot rust. Their initial cost is about $300 more than rustable metal for the average $15,000 house but is soon absorbed in the yearly savings. From every standpoint — economy, convenience and comfort—rust-proofing is one of the best investments in home building offered.

For further facts on the advantages of Copper, Brass and Bronze, send for a copy of the booklet, "Rust-Proofed." It will be sent without cost to all who request it. Address "Building Service Department," The American Brass Company, General Offices, Waterbury, Connecticut.

THE AMERICAN BRASS COMPANY, General Offices, Waterbury, Conn.

BRIDGEPORT BRASS COMPANY

Manufacturers of Electric Furnace Brass Pipe

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Products

BRIDGEPORT PLUMRITE BRASS PIPE; BRASS, BRONZE and COPPER TUBES.

"Bridgeport" BRASS TRADE MARK CO. Brass Products

Plumrite Brass Pipe

Over 40 years of pioneering experience by the BRIDGEPORT BRASS COMPANY in making brass pipe has confirmed the Plumrite formula (approximately 60-40 mixture), which also conforms to the standard set by the American Society of Testing Materials.

Note: For certain kinds of service such as salt water lines and in certain sections of the country, Florida for example, pipes of varying alloys are provided to suit conditions. *Copperite* (high copper content), *Admiralty* mixture, or in some instances *pure copper,* may be required. Copperite pipe is recommended for burial under ground. Our experience in installations made under unusual conditions is available free of charge.

Tube Formation and Annealing—Plumrite is made of electric furnace brass, in which scientific control in all stages of manufacture replaces the human element and its uncertainties.

Plumrite Pipe is a seamless brass tubing made by the Mannesmann Process. The brass is cast in a solid billet. This is re-heated and a cylindrical shell is made by piercing a hole along the axis of the billet, simultaneously cross-rolling it with triple rolls into a tube. This hot rolling consolidates and elongates the fiber with well-known beneficial effects.

The tubes, after pickling, are reduced to size by scientifically controlled successive cold drawings. The entire process of manufacture is so engineered as to reduce to a minimum the tendency toward fire-cracking. All pipe is carefully and thoroughly annealed to eliminate any possibility of season cracking. These two defects cause improperly-made brass pipe and tubes to split longitudinally as if along a seam.

Sizes and Tests—Plumrite Pipe is made to American Society of Testing Materials standards, in iron pipe sizes, ⅛ to 6 in., inclusive; standard lengths, 12 ft. Tables of sizes and weights of brass pipe in standard iron pipe sizes are given here. Plumrite Pipe is uniform in diameter and thickness throughout.

Each length is tested to 1000 lbs. hydrostatic pressure per square inch, which gives a large safety factor over service demands.

Identification Mark—Plumrite Pipe is trade-marked with the name "Plumrite" rolled into the metal every 3 inches, as shown.

Special Finishes—Quotations will be sent, on request, for buffing and nickel-plating, buffing and lacquering, or buffing and chromium plating. Plumrite is fine grained pipe and will take a high polish easily.

How to Specify Plumrite Brass Pipe

All water service piping shall be Bridgeport "Plumrite" seamless brass pipe as manufactured by the BRIDGEPORT BRASS COMPANY, Bridgeport, Conn.

Useful Tables

We have placed on this page for the convenience of the architect and specification writer some useful tables. For further information on the subject of water supply, corrosion and kindred themes, send for a copy of our booklet, "Brass Pipe and Piping." Some of the topics discussed are: Deactivation, deaeration, brass pipe manufacture, brass pipe layouts, piping system, design, mechanical pointers for installing, costs, endurance records, etc.

Smaller Sizes of Brass Pipe vs. Iron Pipe

When an architect figures the size of pipe required for a given service, he calculates from the known pressure and the amount of water to be delivered, the size of pipe *theoretically* needed. As a factor of safety against the plugging of a pipe with rust, as in the case of iron pipe, he recommends a larger size.

From many years' experience on a variety of work, the Copper & Brass Research Association gives the following sizes as appearing reasonable:

	In hot water lines	In cold water lines
Instead of ¾″ iron pipe, use	½″ brass	½″ brass
1 ″ iron pipe, use	½″ brass	¾″ brass
1¼″ iron pipe, use	¾″ brass	1 ″ brass
1½″ iron pipe, use	1 ″ brass	1¼″ brass
2 ″ iron pipe, use	1¼″ brass	1½″ brass
2½″ iron pipe, use	1½″ brass	2 ″ brass
3 ″ iron pipe, use	2 ″ brass	.....

DIMENSIONS AND WEIGHTS OF PLUMRITE BRASS PIPE (IRON PIPE SIZES)

Corresponding iron pipe size, in.	Diameter, in.		Approx. weight, lbs. per lin. ft.
	Outside	Inside	
⅛	.405	.281	.246
¼	.540	.375	.437
⅜	.675	.494	.612
½	.840	.625	.911
¾	1.050	.822	1.24
1	1.315	1.062	1.74
1¼	1.660	1.368	2.56
1½	1.900	1.600	3.04
2	2.375	2.062	4.02
2½	2.875	2.500	5.83
3	3.500	3.062	8.31
3½	4.000	3.500	10.85
4	4.500	4.000	12.29
4½	5.000	4.500	13.74
5	5.563	5.062	15.40
6	6.625	6.125	18.44
7	7.625	7.062	23.92

Service

The Bridgeport staff of brass metallurgists, backed by our adequately equipped laboratories, will gladly assist architects and engineers in unusual conditions surrounding the use of brass pipe. They will be glad, without obligation, to help solve your problems.

BRIDGEPORT BRASS COMPANY, Bridgeport, Conn.

Brass, Copper and Bronze Supplies for the Home

Made by T. E. CONKLIN BRASS & COPPER CO., Inc.

54-60 Lafayette Street, New York, N. Y.

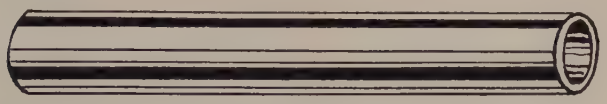
Member Copper & Brass Research Assn.

Products

This company carries for immediate shipment a complete line of Brass, Copper and Bronze Supplies for the Home, including—Brass and Copper Pipe and Pipe Fittings, in plumber's sizes; Sheet and Roll Copper for roofing and flashings; Copper Leaders and Gutters; Bronze and Copper Screen Cloth; Copper Nails, etc. Also Rods, Wire, Tubes, Channels, Angles and other shapes in Brass, Copper, Commercial and Phosphor Bronze, Low Brass and Nickel Silver. Write for price list on material in which you are interested.

TECCO BRAND

Trade Mark Reg.



Seamless Brass and Copper Pipe

All sizes for plumbing and steam-fitting carried in 12-foot lengths for immediate shipment. Larger sizes can be furnished on short notice. Home builders have learned the value of non-rusting brass and copper pipes in connection with plumbing fixtures and look with favor on the building contractor who incorporates them in his plans.

Cross

Tee

Elbow, 90°

Brass Pipe Fittings

A complete line of Elbows, Crosses, Tees, Couplings, Unions, Bushings, Caps, Plugs, Nipples, etc., carried in stock for immediate shipment.

Coupling

Sheet Copper for Roofing and Flashings

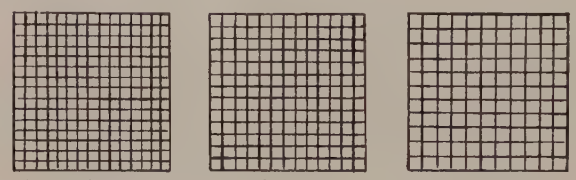
Hot Rolled (or Soft) Copper in sheets 30x60", 48x72", 20x96", 24x96", 36x96"—all gauges from 96 oz. to 10 oz. Cold Rolled (or Half Hard) Copper in patent leveled sheets, 36x96", 30x60", 24x96", 30x96", 24x48", 14x48"—all gauges from 36 oz. to 12 oz. We can also furnish copper in rolls, any width, length and thickness desired for immediate stock delivery.

Copper Leaders and Gutters

Our line of copper roofing material is very complete, including copper leaders, round or square, plain or corrugated; copper gutters and gutter hangers; leader elbows; gutter mitres; leader straps and strainers, etc.

A copper roof with copper gutters and leaders is a fitting crown for the well-built home and costs less than most people imagine. Weathers beautifully, improving in appearance with the lapse of time, and is light, fire-proof and everlasting. On receipt of rough sketch of roof we will gladly quote on the necessary amount of sheet copper for roofing and on gutters, leaders, etc.

Bronze and Copper Screen Cloth



While we make both copper and bronze screen cloth—both of the finest quality—we unhesitatingly recommend the latter (bronze) for window, door and porch screens because of its better wearing qualities and greater strength.

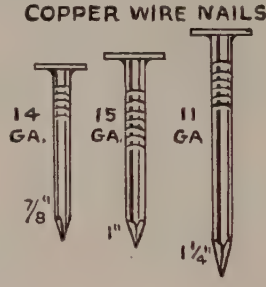
Pure copper metal is naturally soft and when copper wire is woven into screen cloth it does not have the necessary firmness and resiliency to withstand the buffeting of wind and rain without showing signs of wear. If a harder copper wire is used the screen cloth is brittle and breaks easily.

The ideal material for screen cloth (as has been proven by many years of experience) is Commercial Bronze, an alloy consisting of 90 per cent copper and 10 per cent zinc. The addition of this small amount of zinc to the copper not only increases its resistance to corrosion, but gives it the necessary mechanical strength so necessary in window, door and porch screens, particularly when exposed in large surfaces to wind pressure.

Our Bronze Screen Cloth has practically the tensile strength of steel and makes a firm, non-sagging, rust-proof screen that never requires painting and always presents a handsome appearance.

Bronze Screen Cloth costs but little more than copper but it is so superior in wearing qualities that we unhesitatingly recommend it. Copper Screen Cloth can be furnished, however, if desired, and you will find nothing better on the market—made of copper wire 99 per cent pure copper, which is as pure as copper can be produced commercially.

COPPER WIRE NAILS

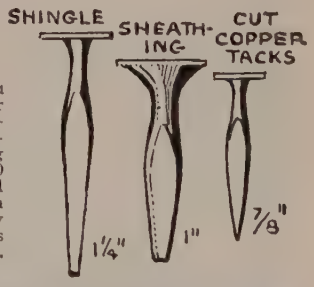


Copper Nails and Tacks

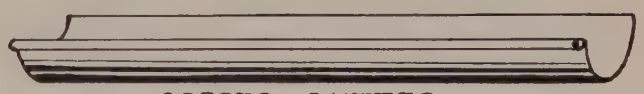
For shingling, sheathing and for all other uses where nails are exposed to the weather, rust-proof copper nails should be used. We can furnish from stock Copper Cut Nails and Copper Wire Nails in sizes suitable for roofing, sheathing, etc.

Our Experts Are At Your Service

If there is any information you desire regarding the use of brass or copper in home construction, our experts will gladly answer your questions. We have been manufacturing copper, brass and bronze since 1860 and believe we are as well qualified as anyone in this business to furnish you first with the information you may desire and later with such materials as you may need. Consult us freely. You will find our advice helpful.



COPPER LEADER-CORRUGATED



COPPER GUTTER

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Plumbing and Heating Materials for Every Purpose

FOR WATER SOFTENERS SEE PAGE 234

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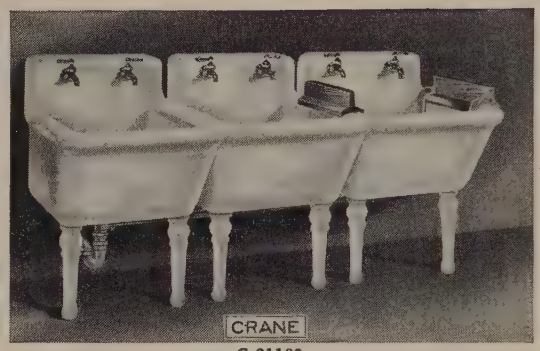
C-10400
Quiet, All White "Corsyn"

C-10400. Scientific construction in the superior "Corsyn" closet has overcome objectionable sounds of flushing. The cover on the tank provides a convenient shelf. This, with the syphon jet action and twice-fired vitreous chinaware, makes it one of the best closets obtainable. All-white model is illustrated.

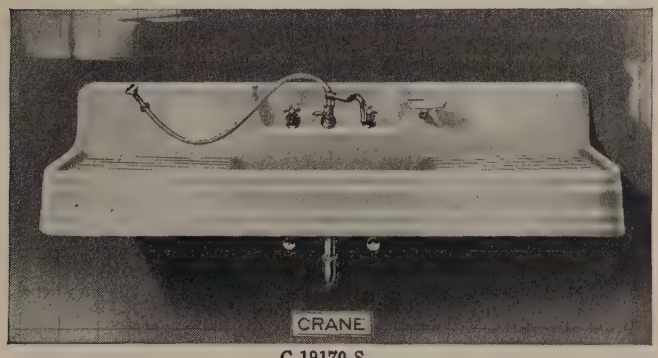


C-21160
Solid Porcelain Laundry Trays

C-21160. Much wash day fatigue may be eliminated with these white solid porcelain laundry trays, in battery. They are supported on solid porcelain legs. A pair of Crane "Agilis" faucets for hot and cold water supply each compartment. One cold water faucet has attachment for hose. Furnished in two sizes: 30x36 inches, and 26x26 inches, and in batteries of two and three trays, as desired. Made in regular or special selection.

C-220-M1
"Corwith" on Pedestal

C-220-M1. The distinctive set-back planes of its aprons have won striking popularity for the "Corwith." The ware is twice-fired vitreous china. The waste is the "Securo" quick-draining direct lift. The combination supply fixture gives hot, cold, and tempered water from single spout. Size: 27x22, 30x24, 33x24, 36x24 inches.



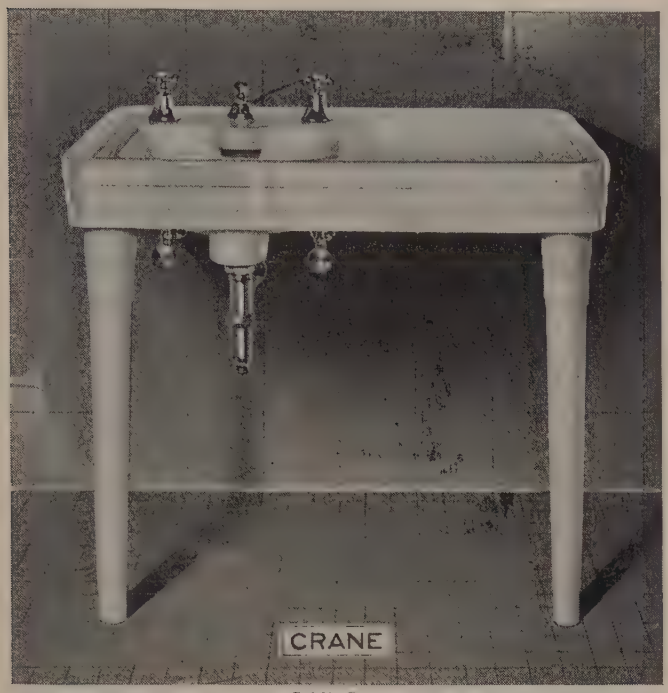
C-19170-S
"Corwith" Beauty for the Kitchen

C-19170-S. The roomy "Corwith" sink is of enameled iron, either regular or stainless. With extra deep sink, it is roomy. With a low back, it may be installed under a window with a deep recess, the fittings are convenient yet out of the way. With the receding planes that identify all "Corwith" fixtures, it is handsome. With fittings chromium-plated, there is no necessity for laborious polishing to keep it shining. The overall width is 24 inches; height of back, 8 inches, depth, 8 inches; the apron, 8 inches; length, 74 and 60 inches. It can also be had with legs, with pop-up waste and overflow, and in single drainboard models.

C-2844-LE22
"Corwith" Solid Porcelain

C-2844-LE22. Baths in beautiful "Corwith" design can now be furnished in solid porcelain, giving true distinction to any room in which they may be placed. Offered in gleaming white or in any of an interesting and charming variety of colors. The supply fixture is concealed compression, with overrim spout. The waste is the Crane "Accesso" pop-up, which operates positively and drains the bath quickly. Nominal lengths: 5 and 5½ feet. Made in regular or special selections as specified.

CRANE CO., 836 So. Michigan Ave., Chicago, Ill.



C-145-C3

"Corwith" Combination Lavatory and Dressing Table
(Patented)

C-145-C3. Many, desiring "Corwith" beauty and the comfort in a bathroom dressing table, but hesitating at the cost of two fixtures, will like this combination. It is of twice-fired vitreous china, and is equipped with a "Securo" combination supply fixture or integral spout. All exposed metal parts chromium-plated. Furnished in 36x21 inch size.

C-100

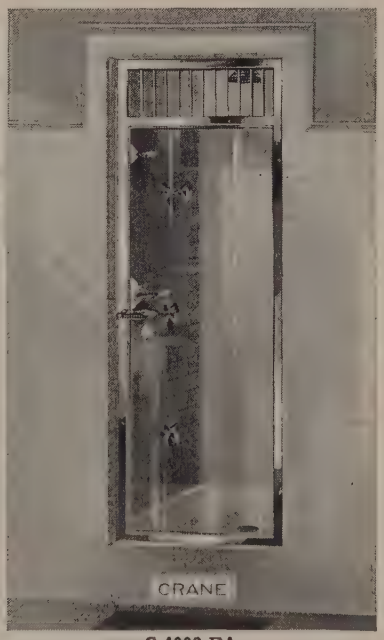
A Masterpiece in Black and Gold

C-100. Symmetry of proportions and rich material are combined in this "Neumar" lavatory. On graceful legs of gold plate rests its 52x27 inch top of black and gold Italian marble. Fittings are gold-plated. The basin is white twice-fired vitreous china. The latest Crane mechanical improvements, including the "Securo" quick-draining waste and combination supply match beauty with convenience.

C-402-C1

"Nova" on Wall Brackets

C-402-C1. A "Nova" lavatory, of twice-fired vitreous china, with wall brackets leaves the floor free for easy cleaning. Rounded contours leave no place for dirt to cling. Integral spout, overflow and splash lip, "Securo" combination fixture and quick draining waste make it convenient. Sizes: 30x24; 27x22, and 24x21 inches.

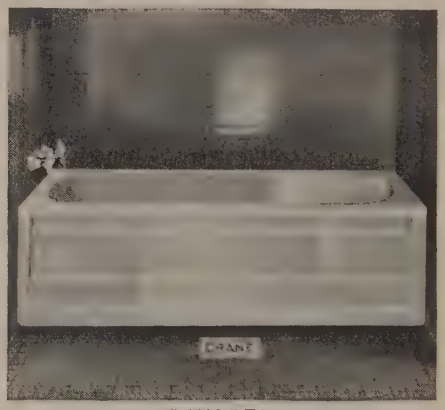


C-4003-EA

Recess With Glass Door Delights Bathers

C-4003-EA. A shower recess in the home is a convenience that enables every member of the family to start the day in glowing spirits. This overhead shower has six side sprays; the two top sprays pivot on ball joints. The water can be directed to the shower head or sprays, or to both.

Note: For proper operation of this shower a minimum of 30 pounds pressure must be maintained at the mixing valve.

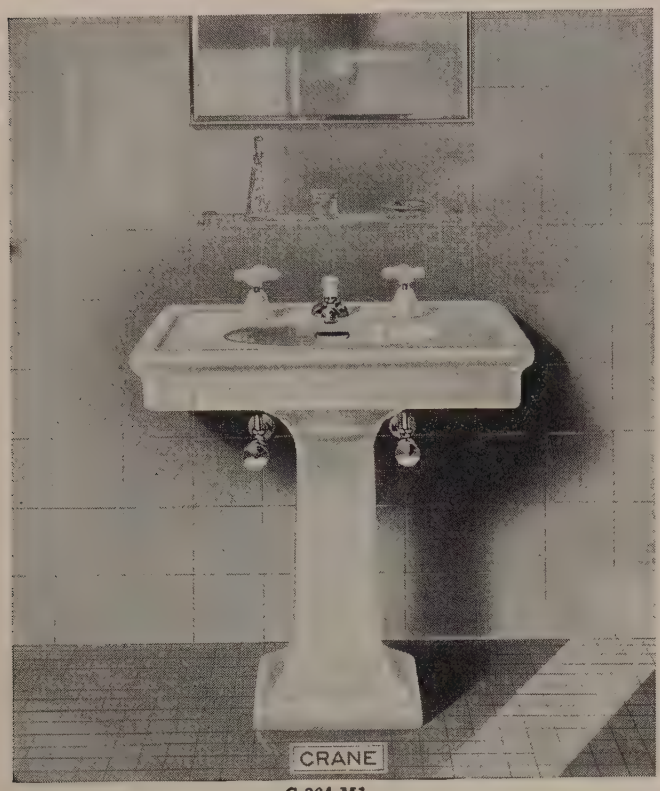


C-3308-LE2

The "Corwith" for Recess

C-3308-LE2. This "Corwith" enameled-iron bath, for built-in back and sides, has concealed compression overrim spout supply fixture at left end. Four-arm indexed all china handles, and china escutcheons. 1½ inch connected waste and overflow with chain and rubber stopper. Nominal lengths: 4½, 5, 5½, and 6 feet.

CRANE CO., 836 So. Michigan Ave., Chicago, Ill.



C-264-M1

The Graceful "Nova"

C-264-M1. Compact and graceful, the "Nova" lavatory has rounded contours which eliminate corners where dirt might cling. Moulded of twice-fired vitreous china. Many people like to wash in running water, without filling the bowl. This "Nova," equipped with "Securo" combination supply and waste fixtures, caters to their desire. Sizes: 30x24, 27x22, 24x21 inches.

C-3284-RA

"Corwith" a Popular Design

C-3284-RA. The "Corwith" enameled iron bath is one of the most popular Crane designs. In this model, for built-in back and right end position, all fittings are concealed. Only controlling levers and handles show. Upper lever controls the shower mixing valve. Two concealed valves below graduate the water flow. The lower china handles control the flow of hot and cold water to bath and drain. Spray for shampoo, also for rinsing tub. Shower head has a removable face and adjustable ball joint. If desired for built-in back and left end, specify C-3284-LA. Nominal lengths: 4½, 5, 5½, and 6 feet.

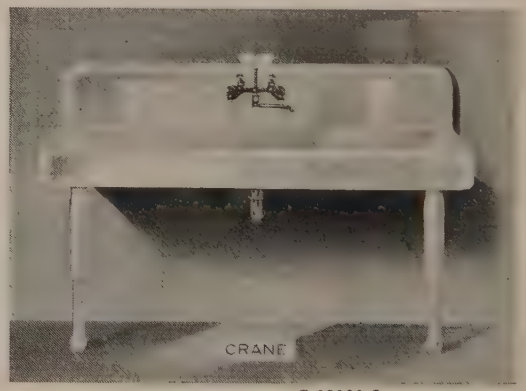
C-10606

All White "Saneto" Syphon Jet Closet

C-10606. This all white syphon jet closet has an exceptionally quick and vigorous flushing action due to the syphon jet construction. The design is simple and graceful. The twice-fired vitreous china ware never loses its glistening whiteness; which together with the White Sanitoure finished seat, and the white finished exposed metal parts, makes this model very easy to keep clean.

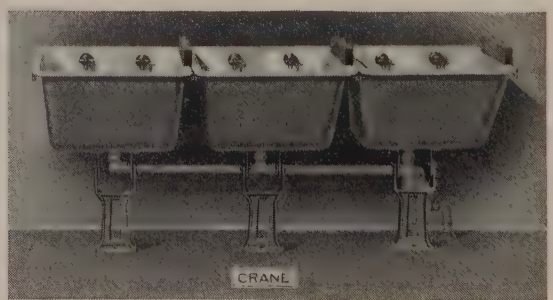
Beauty and Economy

Beauty and convenience are splendidly served and cost kept moderate by the fixtures on this page. The *Corwith* provides a built-in bath, reducing floor space to be kept clean. The syphon jet construction so much in demand is provided in the *Saneto*. The *Nova* is a compact and handsome lavatory. The grouping shown has been carefully selected for average homes.



C-19180-J

C-19180-J. A popular fixture of enameled iron. Double drainboards add to its utility. Adjustable enameled iron legs place its top 30 to 36 inches from the floor. Integral back with "Agilis" double faucet, china soap dish, and swinging spout. Sizes overall: 60x20, 60x22, 74x20, and 74x22 inches.



C-21242

C-21242. These laundry trays may be placed at the most restful height, 31 to 34 inches from the floor. Cast in a single piece, except for the adjustable standards. Enameled inside, painted outside, "Telsa" laundry tray faucets. Two sizes: 24x22 inches with center outlet, and 25½x25½ inches with end outlet. In battery of two and three trays, as desired.

CRANE CO., 836 So. Michigan Ave., Chicago, Ill.

C-650-P9

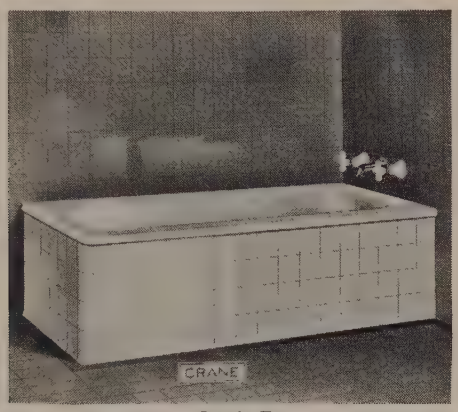
When Space is Limited

C-650-P9. Though designed for use in a bathroom where space is limited, the "Hermitage" is equipped with a basin and slab of ample proportions. Made of the twice-fired vitreous china, it has an integral back, and is equipped with "Triumph Jr." faucets which are self-closing and water saving. A rubber stopper and chain is provided for the waste. Size: 26x13½ inches.

C-750-S5

The Compact "Clermont"

C-750-S5. The "Clermont," moulded of twice-fired vitreous china, is an attractive wall lavatory. It has "Telsa Jr." compression faucets, "Securo" quick draining waste, integral back, over-flow, splash lip, and soap depression. Sizes: 24x21 and 20x18 inches.



C-3330-E2

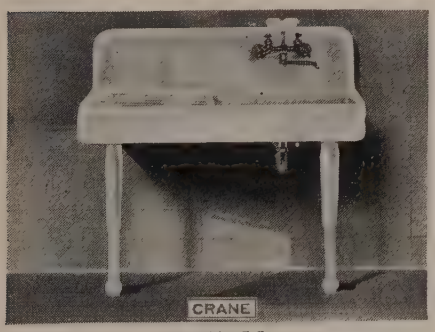
The "Tarnia" Invites Charming Tiled Effects

C-3330-E2. Made for building-in in any position, the "Tarnia" bath, of enameled iron, is popular among discriminating home builders. The waste is fitted with a chain and rubber stopper. All the other fittings are concealed. Equipped as shown, but no tile is furnished. Nominal sizes: 32-inch width, 5, 5½, and 6 feet in length; 36¼ inch width, 5½ feet length.

C-10612

"Saneto" Syphon Jet Closet

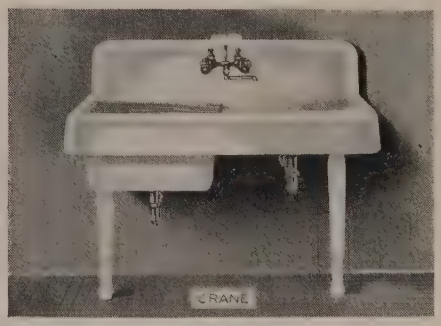
C-10612. With syphon jet construction to give exceptionally quick and vigorous flushing action, the "Saneto" is one of the best closets made. The twice-fired vitreous china ware never loses its glistening whiteness. The design, simple and graceful, harmonizes with the best Crane lavatories and baths. All exposed metal, nickel-plated brass. Seat and cover are birch, mahogany finish, with bar hinge.



C-19190-LJ

Attractive, Economical Sink

C-19190-LJ. Cast in a single piece, this Crane enameled iron sink has adjustable legs to permit installation at any height from 30 to 36-inches above the floor. It has "Agilis" quick compression double faucet with china soap dish, swinging spout, china lever handles. All exposed metal nickel-plated brass. Sizes: 52x20 and 52x22 inches. Drainboard at left. Model C-19190-RJ has drainboard at right.



C-21116-L

A Useful Combination

C-21116-L. In small apartments or houses, where a convenient method for washing dainty articles is lacking, this enameled iron combination sink and laundry tray is especially advantageous. An ash drainboard resting over the tray may be shifted to the sink when the tray is used. "Agilis" double faucet, with china soap dish and swinging spout. Size: 50x22, Sink 7 inches deep inside, tray 14-inch inside.

C-2002-M1

"Majestic" in Appearance

C-2002-M1. The "Majestic" is a handsome pedestal lavatory of enameled iron. It has combination cold and hot water supply, "Securo" quick draining waste, china handles and escutcheons. Exposed metal nickel-plated brass. Also supplied variously fitted. Sizes: 24x20 and 27x22 inches.

Compact, Convenient Sink

C-19250-RK. Although more economical than the sinks shown on preceding pages, in this enameled iron sink no utility is sacrificed. Adjustable legs make possible installation at the most convenient height, between 30 and 36 inches. Crane double faucet with swinging spout provides hot, cold and tempered water. Supplied with wall brackets only, without legs, if desired. Size: 52¼ x20¼. If left-hand drain board is wanted, specify C-19250-LK.

C-19250-RK

C-3442-E8

A Doris Bath on Legs

C-3442-E8. Economical and durable, the "Doris" bath serves when price is a question. It is enameled iron inside and painted outside. Equipped with "Telsa" bath faucet for hot and cold water, and connected waste and overflow, with chain and rubber stopper. Exposed parts are nickel-plated brass. Nominal sizes: 4, 4¼, 5, 5½, and 6 feet.

An Economical Corner Bath

C-3350-LE2. Of enameled iron inside, painted outside, the "Carlton" is an inexpensive bath for a corner. This model has concealed compression rim spout supply fixture. Four-arm indexed all china handles, and china escutcheons. 1½-inch connected waste and overflow, with chain and rubber stopper. Nominal lengths: 5 and 5½ feet.

C-3350-LE2

C-11010

Reverse Trap Mauretania

C-11010. The twice-fired vitreous china "Mauretania" closet, with tank of the same material, has the well known reverse trap construction. The action is thorough and satisfactory. The mahogany finish birch seat and cover contrasts pleasingly with the glistening white of the vitreous china.

Granitine Laundry Trays

C-21294-A. Cast in a single piece, of a special cement composition, supported on a painted steel frame with metal rims and wringer guards, the laundry trays will give satisfactory service. Equipped with rough nickel-plated swinging spout faucet threaded for hose. Lengths: 3 compartment, 72, 80, and 90 inches; 2 compartment, 48, 54, and 60 inches; 1 compartment, 25, 27, and 31 inches.

C-21294-A

CRANE CO., 836 So. Michigan Ave., Chicago, Ill.

C-2240-S5

Compact and Serviceable

C-2240-S5. Cast all in a single piece, with integral back, "Securo" quick-draining waste and "Telsa Jr." faucets for hot and cold water supply, this "Norfolk" enameled iron lavatory is a compact and economical fixture. The metal parts are nickel-plated brass. Size: 21x18-inches.

The very esteem in which Crane plumbing fixtures, valves and fittings are held; the reputation they have earned for beauty and quality has created in many quarters an impression that Crane materials are more expensive than others. The impression is erroneous. Crane fixtures cost not a penny more than any others of comparable design and accepted standing.

In the wide range of the Crane line are fixtures of every type, suited to every purpose, at prices to fit any purse. Whatever the price, Crane quality is never sacrificed. Every piece is given the full benefit of Crane care in manufacture and inspection.

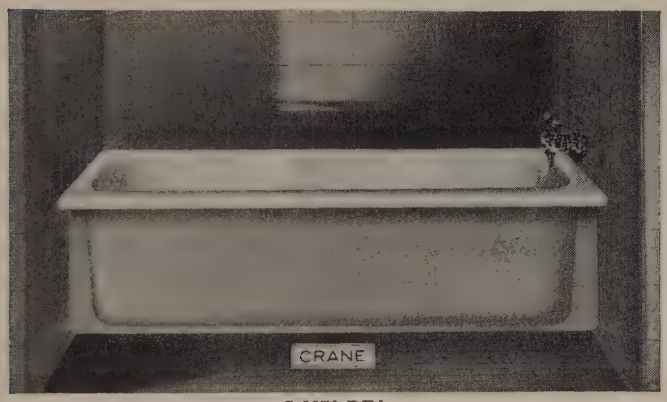
On this page are grouped six fixtures selected for their moderate price range. Simplicity of design and the use of porcelain on iron ware for lavatory, bath and sink; twice-fired vitreous china for closet has resulted in strict economy, combined with attractive designs and lasting serviceability.

All six fixtures represent a wise investment, adequately meeting at low cost, the plumbing needs of thousands of homes.

C-11180

"Illini" Vitreous China Closet

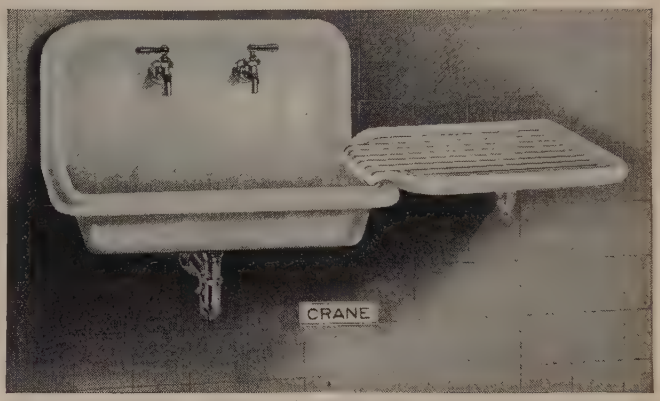
C-11180. The "Illini" closet of twice-fired vitreous china, has the washdown syphon action. It is an economical and satisfactory fixture. The ware is thoroughly sanitary and easy to keep clean. The china low tank and cover, lend attractiveness. Exposed metal parts, nickel-plated brass.



C-3370-RE4

An Economical Recess Bath

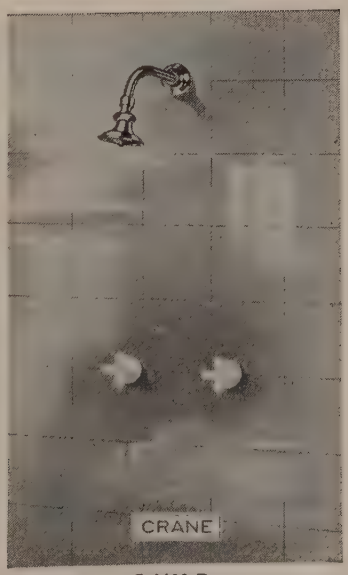
C-3370-RE4. Enameled iron inside and painted outside, the "Verna" is an inexpensive bath for a recess. This model has "Telsa" compression double faucet with shampoo connection; four-ball china indexed handles; ½-inch female flanged union supply connection. 1½-inch connected waste and overflow, with chain and rubber stopper. Nominal lengths: 4½, 5, and 5½ feet.



C-19320-R

In Nine Sizes

C-19320-R. Here is a handy enameled ware sink supplied in many sizes to meet any need in a small or large kitchen. It is equipped with Crane "Meritus" fuller faucets. Many people prefer this style for use as a utility sink in the basement. Sizes: 24x16, 24x18, 20x20, 30x18, 24x20, 30x20, 36x20, 36x22, and 42x22 inches.



C-4400-B

Shower for Bath or Compartment

C-4400-B. This Crane shower is equipped with a 4-inch shower head. Two concealed valves control the temperature and the force of the water. The shower head has a ball joint enabling the user to change the direction of the stream.

C-4375-B

With Concealed Fittings

C-4375-B. A shower with all piping concealed is shown here. 4-inch shower head. Volume control, china trimmed. Crane mixing valve with single lever handle permits the user to obtain hot, cold, or tempered water as desired. The ball joint directs the flow as desired. Face is removable for easy cleaning.

CRANE CO., 836 So. Michigan Ave., Chicago, Ill.

DUROCK BATHROOM EQUIPMENT

Made by THOMAS MADDOCK'S SONS CO.

TRENTON, N. J.

Built to Meet Today's Hygienic Needs

All Maddock bathroom equipment is made of Durock—the hardest, densest and most beautiful vitreous china. The flawless underbody is visible through a fused-in transparent glaze. Nothing can penetrate it. Nothing—not even iodine or ink, can stain it. It is cleaned merely by wiping with a damp cloth.

The Improved Madera has one particularly notable feature —*its large, oversize trapway safely passes sanitary pads.* The Madera will not stop up nor overflow.

Fittings are the finest money can buy. No gurgling, dripping or water leakage. Because the Madera never needs costly replacements or repairs, it is a very definite economy in the long run.

The Improved Madera—K-3001
Price $85

The Madera Is an Asset to the Builder

The Improved Madera is today helping Builders to sell their houses. People know and appreciate this fine, nationally-advertised closet. Its beauty adds distinction to any bathroom. The Madera in the bathroom of a house offered for sale is an indication of the quality of the entire house. It is available either in white or in the beautiful new Blentone colors—a notable Maddock achievement.

Builders are making capital of the Madera installation in booklets and literature concerning their developments.

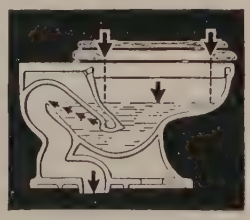
The nationally advertised price of $85 for this advanced toilet marks it in the public's mind as a fixture of unusual quality. The Madera is sold and highly recommended by leading plumbers everywhere.

Notice the difference

The Madera is in every way superior to the ordinary type of water closet.

Large Seat Opening

The seat opening of the Improved Madera is 3 inches longer than usual, for comfort and cleanliness.



Improved Madera

Ordinary Closet

Small Seat Opening

The inadequate seat opening of the ordinary toilet cramps the body, interfering with proper elimination and is easily soiled.

Large Water Surface

Water completely covers all surfaces directly below the seat opening. No chance for poisonous waste to cling to dry surfaces. (See dotted lines)

Large Soiling Area

Bacteria lodge on dry bowl surfaces directly below the seat opening of the ordinary toilet, resulting in a dangerous, hard-to-clean condition.

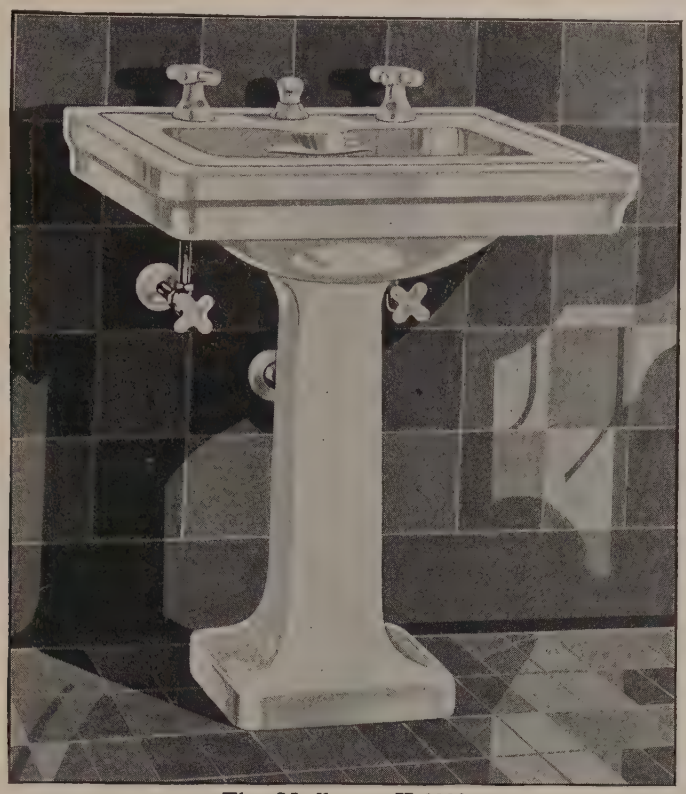
Concealed Twin Jets

The concealed twin jets accelerate powerful positive siphon flushing. So smooth in action, so quiet, it cannot be heard beyond the bathroom door.

Danger of Stoppage

The small trapway in the toilet of yesterday, with its "wash" flushing, is constantly in danger of stoppage when put to today's uses.

THOMAS MADDOCK'S SONS CO., Trenton, N. J.



The Madbury—K-2000

Companion to the Madera

The beautiful Madbury lavatory is the true companion piece to the Improved Madera. Made of Durock, it has the same supremely-hard, impenetrable, dazzling surface. Dirt or germs cannot lodge and breed anywhere in the Madbury. Pedestal, bowl, handles and escutcheons may be as easily wiped clean as fine china.

This fine lavatory provides every improvement known to the modern sanitary engineer. It is the last word in complete hygienic cleanliness. And its fine fittings, made to give a lifetime of faultless service, insure freedom from expensive replacements and repairs.

The Madbury equipped bathroom wins the admiration of the most critical of guests.

A Supreme Example of the Potter's Art

The Madbury lavatory has incorporated the most advanced hygienic requirements into a design of unusual grace and beauty. Its large, square bowl, convenient shelf space, combination all-china supply, hooded over-flow, etc., are only a few of its superiorities.

And this thoughtfully designed lavatory is furnished either in snowy white or in exquisite Blentone colors. These are soft tints which are perfectly blended *under* a fused-in transparent glaze.

Builders today report that the Madera—Madbury combination, in Blentone colors, creates a bathroom of such distinction that it frequently goes far to sell the house.

There has never been a time when bathroom beauty was more sought for.

Like a China Dish

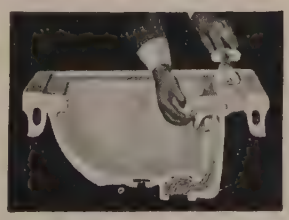
The Madbury cannot be stained, even by ink, iodine or acid. It absorbs nothing. It can be cleaned *clean*, like a china dish, merely with a damp cloth. Harsh cleaning compounds are unnecessary.

Anti-Splash Rim

Water cannot splash out of the bowl of the Madbury lavatory onto the user. Even with the strongest water pressure, water is turned back into the bowl by the anti-splash rim, as shown.

Self-Cleansing Overflow

The overflow channel in lavatories is often a lodging place for filth and disease germs. The Madbury overflow may be thoroughly flushed by simply placing finger over supply nozzle and turning on water, which is forced through overflow as shown.



All China Handles

No metal handles to require constant polishing or become covered with vertigus. Madbury handles and escutcheons, like bowl and pedestal are made of Durock. They may be kept spotlessly clean with merely a damp cloth.

THOMAS MADDOCK'S SONS CO., Trenton, N. J.

Price $50

The Madbrook
K-3050W

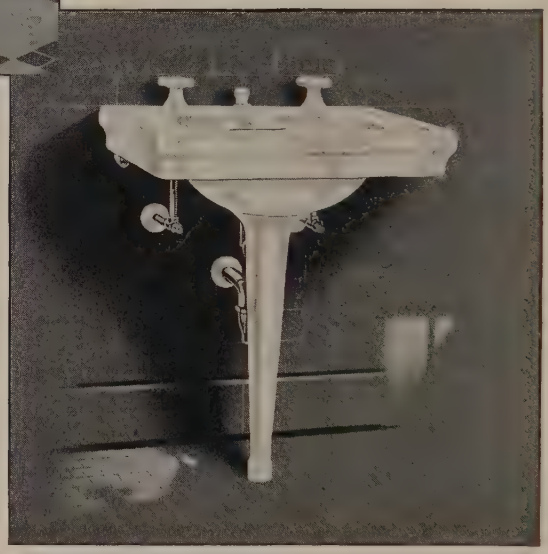
Maddock's Madbrook is a thoroughly modern toilet of high quality. From an hygienic standpoint it is greatly superior to the old-type water closet and the cheap toilets of today. The Madbrook is equipped with dependable fittings and, like all Maddock bathroom equipment, is made of Durock—the finest vitreous china.

Sanitation and beauty at moderate cost

This combination of bathroom fixtures —both made of Durock—combines sound hygienic design with durability, long life and unusual good looks.

The Madbrook toilet has the same long seat and opening of the Improved Madera. It has a large water area under the seat opening and quiet, though powerful, flushing.

The Madbury lavatory on leg makes available the same advanced sanitary features as in the Madbury pedestal lavatory at an extremely moderate cost.



K-2201

The Madbury (on leg)

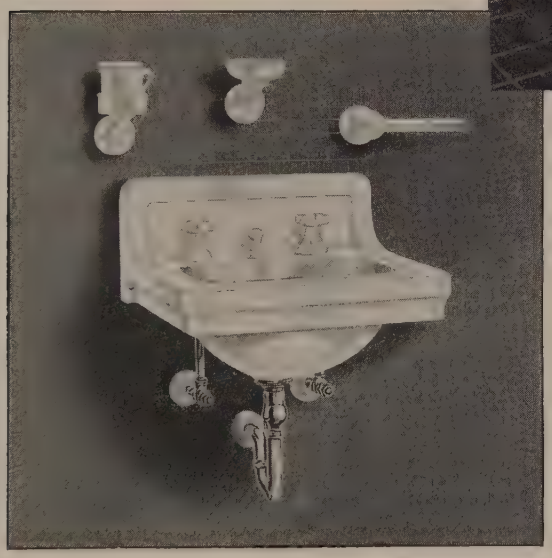
The pedestal on the Madbury lavatory is here replaced by a gracefully-designed, tapered leg. The bowl is the same as in the Madbury with pedestal.

THOMAS MADDOCK'S SONS CO., Trenton, N. J.

The Maderno
K-3023

This is a well-made, dependable, gracefully-designed modern toilet at an unusually moderate price. It has the elongated bowl and seat opening of the Madbrook. Seat is of finished mahogany and will not crack or split. The Maderno is an outstanding value, combining low price with sanitary reliability.

Price $31



Madbury (wall-hanging)
K-2403

In this Durock lavatory the back is bracketed to the wall. It offers the same outstanding superiorities which mark the Madbury on pedestal and leg. Moderate in cost, this lavatory is particularly useful in small bathrooms where space is at a premium.

Dependability in the Modern Bathroom

These moderate-priced fixtures are unusual values. Both with Durock bodies, they have all the lustrous beauty of the finest bathroom equipment.

For the bathroom in which price is the deciding factor, the Maderno and wall-hanging Madbury provide a degree of quality seldom found in fixtures in this price class.

Only the greatest attention to production and years of experience in one of the largest and finest vitreous china plants in America, could produce bathroom fixtures at such a price.

THOMAS MADDOCK'S SONS CO., Trenton, N. J.

ALBERENE STONE

(Natural Quarried Soapstone)

LAUNDRY and KITCHEN FIXTURES

ALBERENE STONE COMPANY

Main Office
153 W. 23rd Street, New York

Quarries and Mills
Schuyler, Va.

BRANCHES

Boston, Mass. Chicago, Ill. Cleveland, Ohio Newark, N. J.
Philadelphia, Pa. Pittsburgh, Pa. Richmond, Va.

What Alberene Stone Is

Alberene Stone is a natural quarried soapstone of superior quality—not a composition or an imitation. It is proof against time and hard usage because it is solid stone. It is quarried in large blocks, sawed into slabs, rubbed to a satin-like finish, and fabricated and assembled. It is light-gray in color, hard and dense, non-absorbent, non-staining, resistant to all chemical action—it is non-chipping, non-flaking, non-scaling.

TRADE MARK

Alberene Stone Laundry Trays and Sinks

Fixtures are made up from selected slabs of Alberene Stone, with tongue-and-groove joints held by concealed bolts and water-proof cement. They have the solidity and permanence of one-piece construction—no cracks or crevices in which dirt or germs might lodge. Having a non-absorbent, smooth surface, easily kept clean, they are always dry, odorless and absolutely sanitary.

Alberene Plus Duco Colors

In keeping with the vogue of color, Alberene Fixtures can now be supplied in four attractive colors, Green, Yellow, Blue and Rose, also in White. The addition of color makes Alberene Stone Fixtures far and away the most appropriate, economical, artistic and durable fixtures for bungalow, apartment or mansion.

Fittings, Heights, Etc.

Alberene Stone Trays and Sinks can be had with several different styles of legs or standards. Standard heights 16″ and 24″; special adjustable legs can be furnished. Faucets and fittings are not supplied with the tubs, but any standard styles in these can be provided by the plumber.

Sizes and Styles

There are 12 standard styles in Alberene Stone Laundry Trays—9 standard styles in sinks—and 5 standard styles in combination Tray and Sink Fixtures. The range of sizes in each of these 26 styles covers every requirement. Options in most of the standard styles afford a still wider choice. The dimensions given are the outside measurements, in all cases. A complete Style Book giving illustrations, sizes and options in all styles, will be sent on request.

Distribution and Delivery

Plumbing jobbers everywhere carry popular styles and sizes of Alberene Stone Trays and Sinks in stock. These jobber stocks are supplemented by larger and more diversified stocks at factory and branch warehouses. Prompt delivery can usually be made in the most popular sizes and styles.

Responsibility

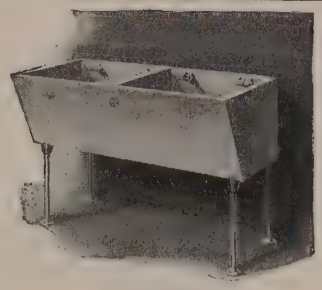
Alberene Stone has been quarried and fabricated for over 40 years. The company is the oldest and largest producer of these natural stone specialties in the world. It owns the only known deposit of soapstone of the physical, chemical and structural characteristics of Alberene Stone, a name coined to distinguish this superior soapstone. Millions of Alberene Stone Trays and Sinks are in use. Every Alberene Fixture is absolutely guaranteed.

Other Alberene Stone Products

The unique physical properties of Alberene Stone give it distinct value in the home of range hearths and backs, fire-place hearths and linings, radiator slabs and drips, garden furniture, garden flagging. In schools, hospitals and business buildings it is widely used for stair treads and landings. While as a material for laboratory equipment in schools, colleges, hospitals, etc., Alberene Stone is recognized as the material without a peer.

ALBERENE STONE CO., 153 W. 23rd Street, N. Y.

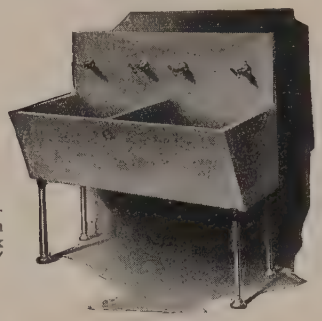
STYLE K101
Single-compartment laundry tray without high back; here shown with cover but regularly furnished without cover; two sizes, 24″ x 24″ x 16″ deep and 20″ x 20″ x 14″.



STYLE K104
Two-compartment laundry tray without high back; three sizes, 42″ x 24″, 48″ x 24″, either 16″ or 14″ deep, and 40″ x 24″ x 14″ deep.

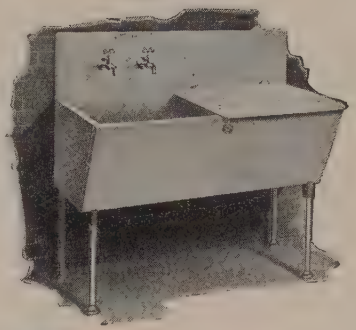
STYLE K108
Three-compartment laundry tray without high back, 72″ x 24″ x 16″ deep.

STYLE K102
Single - compartment laundry tray with 12″ high back, two sizes, 24″ x 24″ x 16″ deep and 20″ x 20″ x 14″ deep.

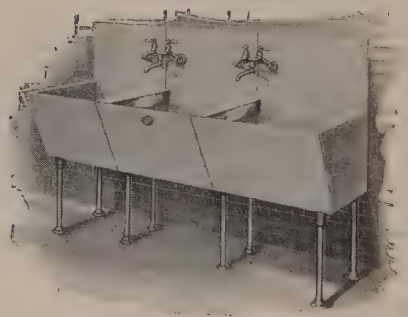


STYLE K105
Two-compartment laundry tray with 12″ high back; three sizes, 42″ x 24″ and 48″ x 24″, 16″ deep.

STYLE K109
Three-compartment laundry tray with 12″ high back, size 72″ x 24″ x 16″ deep.

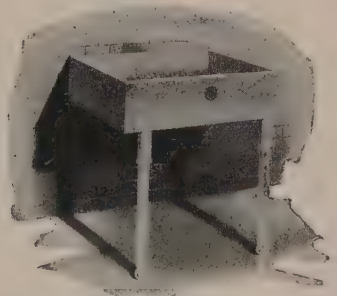


STYLE K135b
Solid combination tray and sink, four sizes, 42″, 48″, 54″ and 60″; 22″ and 24″ wide; the 42″—22″ wide with 8″ high back, all others 24″ wide with 12″ high back.



STYLE K116
Combination three single laundry trays with 12″ high back; size of units 24″ x 24″ x 16″ deep; any desired number in combination.

STYLE K134b
Solid combination tray and sink without high back, four sizes, 42″, 48″, 54″, and 60″; 24″ wide; right or left hand as ordered.



STYLE K146
Kitchen sink, straight front, no high back; five sizes, 24″ to 48″, 24″ wide, 8″ deep; furnished in same sizes with 12″ high back, as Style K147.

STYLE K156
Kitchen sink with double stone drainboard and 12″ plain high back; nine sizes.

STYLE K150
Kitchen sink with stone drainboard, and 12″ high back with shelf and return ends; right or left hand as ordered, nine sizes.

STYLE K151
Kitchen sink with stone drainboard and 12″ plain high back; right or left hand as ordered; nine sizes.

STYLE K147B
Kitchen sink, bevel front, 12″ high back, seven sizes, furnished also without high back, as Style K146B.

STYLE K160
Kitchen sink with double stone drainboard, 12″ back with shelf and return ends; nine sizes.

ALBERENE STONE CO., 153 W. 23rd Street, N. Y.

BRUNSWICK TOILET SEATS

WHALE-BONE-ITE
The World's Finest
Toilet Seat

Made by
THE BRUNSWICK-BALKE-COLLENDER CO.
623 South Wabash Ave., CHICAGO
BRANCH OFFICES IN ALL PRINCIPAL CITIES

THE WHITE SEAT
Best Popular Priced
Seat Made

The Whale-bone-ite Seat

This company (well known as makers of world-famous billiard tables) also manufactures the finest Toilet Seat made—the WHALE-BONE-ITE.

This is the Toilet Seat *de luxe*—a molded seat without a seam, scientifically designed for comfort; absolutely sanitary, and with an everlasting polish that time will not dim.

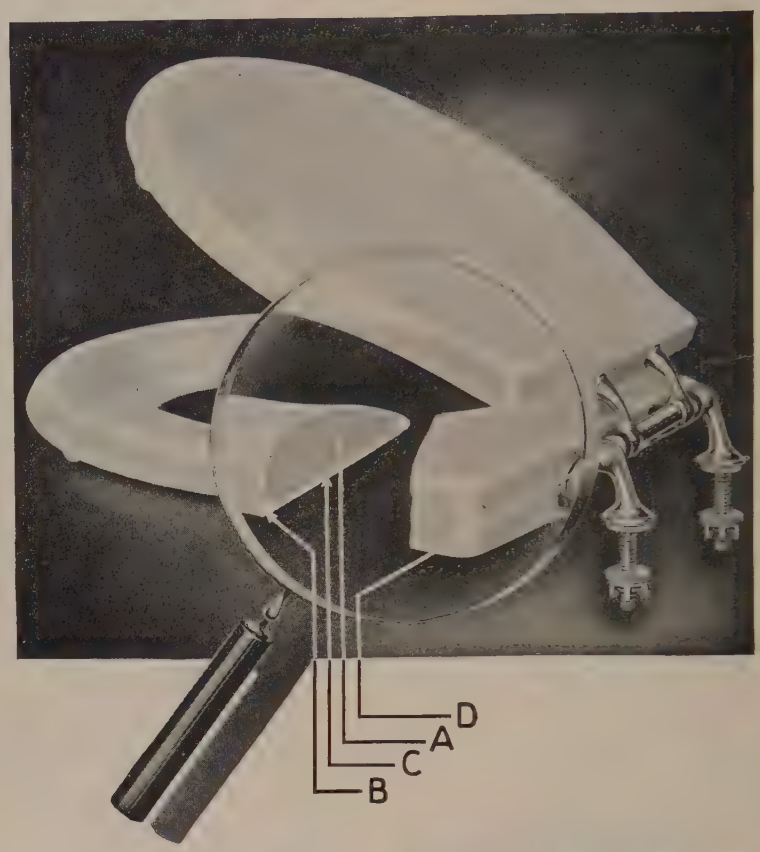
The rich ebony, or mahogany, finish of this seat makes it the preferred seat for bathrooms in the modern style, in which color effects are taking the place of the plain white-tiled bathrooms of former days.

The White Seat

Similar to the Whale-bone-ite in method of construction, but cheaper in price, is The White Seat, for those who wish an all-white bathroom. This is unquestionably the best popular-priced Toilet Seat made, and is sold at a price low enough to enable you to use it in any home you build. The Whale-bone-ite Seat costs somewhat more and is recommended for the finer types of residences. Catalogs and price-lists on both types of seats will be mailed you on request.

A Seat Without a Seam

The ordinary toilet seat is made of several pieces (usually of wood), doweled and glued together. Such seats will inevitably open at the joints in time, presenting an unsightly appearance and making it impossible to keep the seat hygienically clean. Moreover, the enamel, or varnish, finish soon shows signs of wear, particularly if frequently washed, as toilet seats should be. Wood, a porous material, is not suitable for toilet seats, which should be absolutely non-absorbent. Whale-bone-ite and White Seats are free from all these faults. Both are made of dense, non-absorbent materials. The Whale-bone-ite Seat is molded under heavy hydraulic pressure into a single piece without seams or joints of any kind. The finish is not a thin skin of enamel, varnish or celluloid, but is the natural finish of the material of which the seat is made, highly polished, and proof against discoloration, crazing or cracking.



A—Constructed of straight grain hardwood core, with reinforced dowels, an insurance against warping and splitting.

B—Pyroxline reinforced insert provides ample welding surface for the pyroxline sheets, and a cushion against impacts. This degree of durability is found only in the Brunswick reinforced Cushion Edge.

C—The surface is easy to keep clean and will not crack, craze nor discolor. It is literally one piece and cannot be broken or pulled apart where the upper and lower sheets meet, this being an exclusive Brunswick feature.

D—The sturdy non-fouling hinge is attached in a manner that does not expose metal to the surface of the seat—guaranteeing beauty and durability.

The Sanitary Non-Fouling Hinge

Note that no holes are drilled in the surface of the seat. All hinges for both seat and cover are attached at the rear edge, preserving the surfaces of seat and cover unbroken, thus preventing lodgment of dust and moisture on any part of surface of seat.

Made in Many Styles

Whale-bone-ite and White Seats are made in many styles, only a few of which are illustrated on these pages.

Write for complete catalog, or consult your plumbing contractor, who is familiar with the merits of these superlatively good toilet seats.

WHALE-BONE-ITE SEAT
No. 16-91 Saddle Seat With Cover No. 16-9 Saddle Seat Without Cover

WHALE-BONE-ITE SEAT
No. 24-91 Seat With Cover No. 24-9 Seat Without Cover

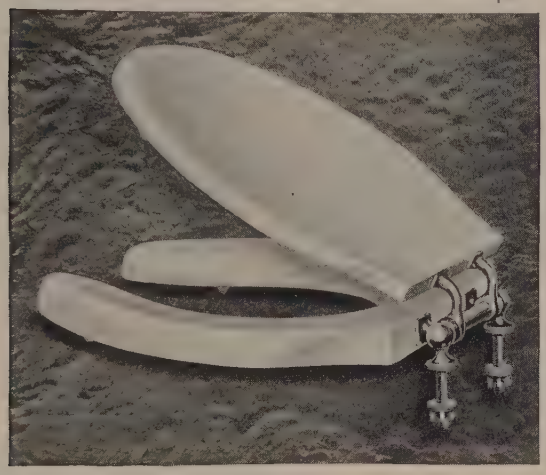
Prices on Whale-Bone-Ite Seats on Application

THE BRUNSWICK-BALKE-COLLENDER CO., Chicago, Illinois

No. 309

BRUNSWICK white sheet covered closed front seat and cover. No. 61 non-fouling concealed, N. P. bar hinge.

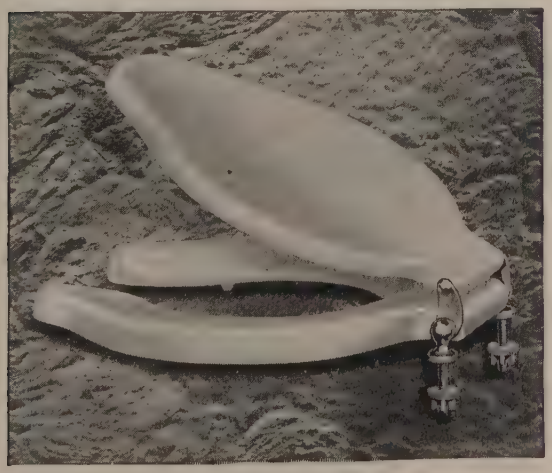
No. 309 Seat and Cover.....$8.50



No. 356

BRUNSWICK white sheet covered, open front seat and cover, No. 91 non-fouling concealed bar hinge.

No. 356 Seat and Cover.....$10.25



No. 375

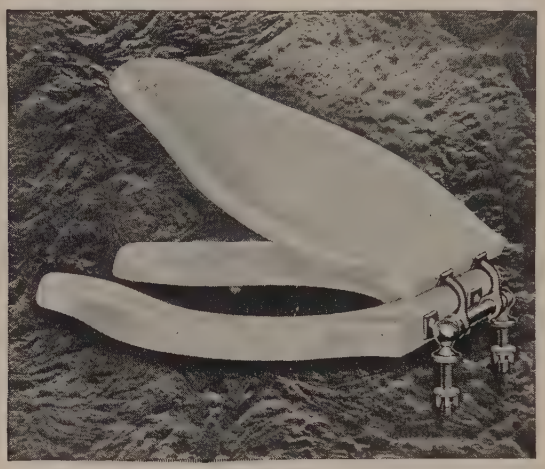
BRUNSWICK white hygienic seat and cover, chromium hinges. For lipped bowls.

No. 375 Seat and Cover.....$13.80

No. 315

BRUNSWICK white sheet covered seat and cover, with No. 12 heavy N. P. leaf hinge.

No. 315 Seat and Cover.....$8.50

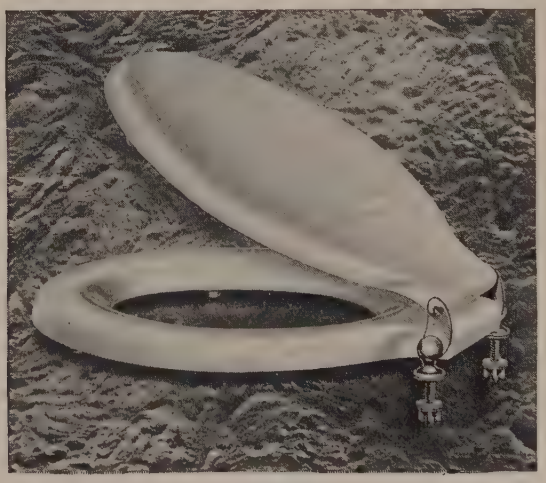


No. 378

BRUNSWICK white sheet covered, open front seat and cover, for extended lip bowl, No. 91 non-fouling concealed bar hinge.

No. 378 Seat and Cover.....$11.45

No. 379 Seat, no Cover..... 9.10



No. 300

BRUNSWICK white hygienic seat and cover. Chromium hinges.

No. 300 Seat and Cover.....$11.60

CHURCH SANI-WHITE TOILET SEATS

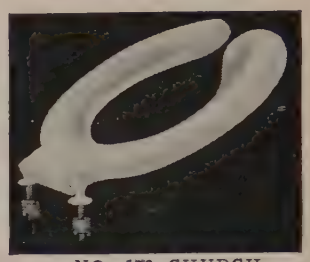
Manufactured by C. F. CHURCH MFG. CO.

HOLYOKE, MASS.

NO. 142 CHURCH
Sani-White Sheet Covered Seat and Cover, with white cushion bar bumpers. All-White (including hinges) which eliminates exposed metal.

NO. 186 CHURCH
Sani-White Sheet Covered Full Saddle Open Front Seat and Cover, for extended lip bowl, with white cushion bar bumpers. All-White (including hinges) which eliminates exposed metal.

Above everything else in the bathroom, THE TOILET SEAT reflects your standards of cleanliness.



NO. 170 CHURCH
Sani-White Sheet Covered Open Front Full Saddle Seat, no Cover, for regular bowl, with white cushion bar bumpers. All-White (including hinges) which eliminates exposed metal.

NO. 162 CHURCH
Sani-White Sheet Covered Open Front Full Saddle Seat and Cover, for regular bowl, with white cushion bar bumpers. All-White (including hinges) which eliminates exposed metal.

NO. 425 CHURCH
This beautiful, strong Church Seat has been swept into many modern houses on the wave of color that is making American homes brighter and more cheerful places to live in. The covering on this seat is solid, not a mere paint, lacquer or enamel. It comes in nine sea pearl tints and nine plain colors.

Church Toilet Seats are so thoroughly backed by national advertising that their fame has spread from coast to coast. Millions of experienced home owners and home seekers know the exceptional qualities of the Church Seat. They know that it is the accepted toilet seat the world over, a distinction earned by maintaining unsurpassed standards of wear and quality.

The Church Seat is an ever-durable, modern bathroom appurtenance covered with a handsome material which will never chip, crack, lose its original color or in any way deteriorate. This remarkable covering is not a paint, lacquer or enamel. It is solid.

The fact that Church Seats come in a wide variety of shades and beautiful colors including the usual white, makes them adaptable to every type of bathroom. They fit any bowl.

People have become educated to the point where they carefully inspect the bathroom of any house they intend to buy or rent. They now know that the quality of the bathroom is the key to the whole layout, and one of the tests of any bathroom is whether or not it is equipped with a Church Toilet Seat. This is borne out by the fact that the Church Sani-White Seat has now become the usual specification of architects, the fact that millions identify the best toilet seats with the name Church, and the fact that there are more Church Seats installed in modern American homes than any other toilet seat manufactured.

BATHROOM STOOL
This bathroom stool comes in nine sea pearl tints and nine plain colors. Like the toilet seats, it is covered with the ever-durable material that will never chip, crack or lose its original color.

Church sani-Seats

LOOK FOR THIS NAME ON UNDER-SIDE OF SEAT

"Toilet seats for better bathrooms"

"Sold by all Plumbing Stores since 1898"

C. F. CHURCH MFG. CO., Holyoke, Mass.

CHURCH SANI-BLACK TOILET SEATS

Manufactured by C. F. CHURCH MFG. CO.

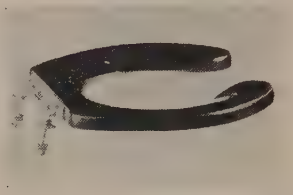
HOLYOKE, MASS.

NO 19-C CHURCH
Sani-Black Open Front Full Saddle Seat, no Cover, with sanitary Cutout back for extended lip bowls. Molded black check hinges. No exposed metal.

NO. 15-C CHURCH
Sani-Black Full Saddle Seat, no Cover. For regular bowl, with all-black molded check hinges. No exposed metal.

This toilet seat WILL NEVER WEAR OUT—it is guaranteed for the building's lifetime.

NO. 5300 CHURCH
Sani-Black Open Front and Open Black Full Saddle Seat, no Cover, for extended lip bowl with No. 5300 extra-heavy all-black molded concealed check hinge. No exposed metal. Cushion bar bumpers. Standard dimensions and fits all extended lip bowls.



NO. 57 CHURCH
Sani-Black Open Front, Semi-Extended Lip Seat, no Cover, with No. 57 extra-heavy nickel-plated cast brass check hinge. Cushion bar bumpers. The Semi-Extended Lip seat is longer than the open front seat for regular bowl, but does not attain the full length of the extended lip seat. Can be used on either a regular or extended lip bowl. Measures overall, 17 in.

BATHROOM CHAIR
A smart, strong little bathroom chair that may be matched with any of the Church Colored Toilet Seats, and like them it is covered with the remarkable, indestructible material that is not a paint, lacquer or enamel.

NO. 14 CHURCH
Sani-Black Full Saddle Seat and Cover, for regular bowl, with all-black molded hinges. No exposed metal anywhere on either seat or cover. Cushion bar bumpers.

Church Sani-Black Seats are especially constructed for hotels, hospitals, schools and office buildings—wherever constant, hard usage is to be expected. Installed in thousands of the most prominent public buildings throughout the country, they are giving complete satisfaction year after year. No other toilet seat made is guaranteed so unconditionally. The fact that the Church Sani-Black Seat is guaranteed for the life of any building in which it is installed, speaks for itself.

We shall be glad to send to architects and contractors an illustrated, 100-page catalog describing our full line of Sani-White and Sani-Black Seats. We will send, at the same time, an actual cross-section of the Sani-Black Seat, so that you can examine for yourself its indestructible construction. C. F. Church Manufacturing Co., Holyoke.

Church sani-Seats

"Toilet Seats for Better Bathrooms"
"Sold by all Plumbing Stores since 1898"

C. F. CHURCH MFG. CO., Holyoke, Mass.

Snow White Steel Medicine Cabinets and Lavatory Mirrors

Manufactured by

HESS WARMING & VENTILATING CO.

1207-1229 S. Western Ave., Chicago, Ill.

Style S—To Recess

Steel medicine cabinets are an accepted necessity in every modern bathroom. The Hess Company has been a pioneer in the manufacture of steel medicine cabinets. The Hess line is wide in variety, covering every need of the builder and every cabinet is designed and manufactured to the highest possible standard, which assures a lifetime of useful service. Hess medicine cabinets are constructed of steel with welded corners. They are seamless and have a baked on enamel finish.

All Hess cabinets are equipped with mirrors of the highest grade plate glass which is supplied with either plain or beveled edges. All metal hardware is of solid brass, heavily nickel plated and shelves can be furnished of enameled steel or polished plate glass. Shelves are easily adjustable.

Hess cabinets are made either to recess or to hang on the wall. Recessed cabinets (styles E. and F.) require a depth of 4¼ in. from face of finished wall to back of recess, and extend 1¼ in. from the wall. Nos. 19E and 29F will fit between studding when placed 16 in. from centers. Larger sizes require cutting of one stud. All cabinets are furnished with turn catch handles, but a Yale cylinder, flat key lock and two keys will be furnished at an additional charge when ordered. All cabinets are furnished right hand unless ordered left hand. Cabinets of special sizes or designs can be furnished upon order.

Style S—Open, to Recess

Hess Steel Medicine Cabinets

Prices Furnished Upon Application

Style No.	DIMENSIONS			Ship. Wgt. Lbs.
	Outside	Opening in Wall	Mirror	
Style S—Recessed Cabinet with open pocket shelf below				
319	15⅜x24⅝	13 x22	10x14	27
319½	17⅝x26⅝	15 x24	12x16	31
320	19⅝x28⅝	17¾ x26¾	14x18	35
321	21⅝x30⅝	19¾ x28¾	16x20	40
322	23⅝x32⅝	21 x30	18x22	47
323	25⅝x34⅝	23 x32	20x24	54
Style R—Recessed Cabinet				
329	15⅝x19⅝	13 x17	10x14	22
329½	17⅝x21⅝	15 x19	12x16	26
330	19⅝x23⅝	17¾ x21¾	14x18	30
331	21⅝x25⅝	19¾ x23¾	16x20	35
332	23⅝x27⅝	21 x25	18x22	42
333	25⅝x29⅝	23 x27	20x24	50
Style H—Hanging Cabinet				
49½	18¼ x21¾	.....	12x16	53
50	21½ x24½	.....	14x18	60
51	23½ x26½	.....	16x20	71

Left hand cabinets, $1.50 extra; Yale lock with 2 flat keys $2.50 extra.

Style R—To Recess

HESS FURNACES

The Hess electrically welded steel furnace is the result of 56 years of manufacturing furnaces. It is air tight, burns any kind of fuel and never leaks. Thousands of satisfied customers throughout the country testify to the advantages of Hess furnaces. Equipped with blower, thermostatic and humidity control. Write for complete information.

Style H—To Hang on Wall

HESS WARMING & VENTILATING CO., 1207-1229 S. Western Ave., Chicago

Hess DeLuxe Snow White Steel Medicine Cabinets

Manufactured by

HESS WARMING & VENTILATING CO.

1207-1229 S. Western Ave., CHICAGO, ILL.

Venetian Model

Designed in the prevailing mode, the Hess deluxe line of cabinets offers to the home owner or builder a cabinet concealed by a beautiful mirror, simply etched to add a chaste note of refinement to the modern bathroom. Figured in added beauty, Hess deluxe cabinets are a genuine asset whether a home is built for use or for sale.

The mirrors can be furnished beveled or plain and conceal the entire cabinet. The Venetian model has mitered lines and etched floral scroll. Metal rosettes hold the mirror firmly.

The Colonial mirror has mitered lines with metal rosettes.

Other designs and styles can be furnished when ordered in quantity.

Colonial Model

Venetian Model

Prices Furnished Upon Application

Number	Mirror	Wall Opening
518	18x24	13x17x4
519	16x28	13x22x4
519½	18x30	15x24x4
520	20x32	17x26x4

Colonial

419	16x25	13x22x4
419½	18x27	15x24x4
420	20x29	17x26x4
429	16x20	13x17x4
429½	18x22	15x19x4
430	20x24	17x21x4

Venetian Model Framed

Prices Furnished Upon Application

The models listed below are similar to the Venetian model, except for a thin frame of monel metal, which accentuates the bevel of the glass and sets off the mirror. The frame also serves as a protection to the mirror.

Number	Mirror	Wall Opening
518 Framed	18x24	13x17x4
519 Framed	16x28	13x22x4
519½ Framed	18x30	15x24x4
520 Framed	20x32	17x26x4

Colonial

419 Framed	16x25	13x22x4
419½ Framed	18x27	15x24x4
420 Framed	20x29	17x26x4
429 Framed	16x20	13x17x4
429½ Framed	18x22	15x19x4
430 Framed	20x24	17x21x4

Lavatory Mirrors

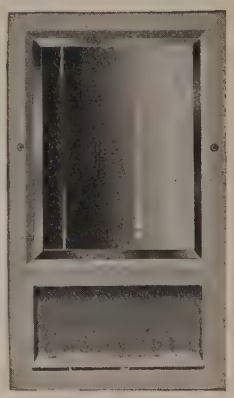
Style A

In hotels or clubs, where an attractive wall mirror is desired, but a medicine cabinet is not necessary, we recommend Hess Lavatory Mirrors. The mirror is of the same quality as that used in our medicine cabinets. The frame is of steel with baked on enamel finish.

Style A has plate glass shelf with glass towel bar. Shelf is supported by white enamel brackets. Can be furnished without shelf and bar if desired.

Style AA has pocket shelf below mirror with plate glass bottom.

Lavatory mirrors attach to the wall by screws which are furnished. Toggle bolts for use in hollow tile or plaster walls will be supplied when requested. Special sizes of lavatory mirrors can be furnished when ordered in quantity.



Style AA

Style A—Lavatory Mirror With Glass Shelf and Towel Bar

Prices Furnished Upon Application

Style A No.	Outside Dimensions	Size of Mirror	Shipping Weight Pounds
6	12⅝x16½	10x14	30
6½	14⅛x18½	12x16	33
60	17¼x21¼	14x18	35
61	19¼x23½	16x20	38
62	21¼x25½	18x22	40
63	23¼x27½	20x24	43

Style AA—Lavatory Mirror With Open Pocket Shelf Below

Prices Furnished Upon Application

Style AA No.	Dimensions		Wall Opening	Ship. Wt. Lbs.
	Outside	Mirror		
16	12⅛x25½	10x14	6½x 9¼	25
16½	14¾x27½	12x16	6½x11¾	28
160	17¼x29¾	14x18	6½x13¾	30
161	19¼x31¼	16x20	6½x15¾	35
162	21¼x33¾	18x22	6½x17¾	40
163	23¼x35¾	20x24	6½x19¾	45

HESS WARMING & VENTILATING CO., 1207-1229 S. Western Ave., Chicago

UNITED STEEL MEDICINE CABINETS

Manufactured by UNITED METAL BOX CO., Inc.

473-491 President Street, Brooklyn, N. Y.

Series 2500

"United" Steel Medicine Cabinets are standardized as to types and sizes to meet the great need of apartment houses, hotels, institutions, public buildings and private homes for a beautiful, absolutely sanitary and permanent steel cabinet at a most reasonable price.

Constructional Features of All "United" Cabinets

Indestructible—Entire cabinet is made of heavy gauge steel and protected against rusting.

Dustproof Interior—Front of cabinet is made from one piece and door is recessed into the front frame to exclude dust and dampness.

Hinges—The cabinets are made with concealed hinges and exposed continuous hinges, and are specially mounted so that the door will not sag or tear loose with rough usage.

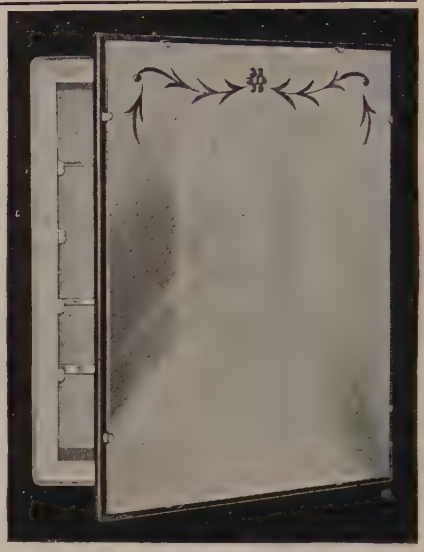
Doors—The doors are built up hollow steel construction, specially built and assembled in a manner to make the mirror easily accessible for replacement.

Adjustable Shelves—Bulb edge shelves are furnished with each cabinet. Shelf clips are permanently attached and so constructed as to retain shelf whether door hinges to right or left.

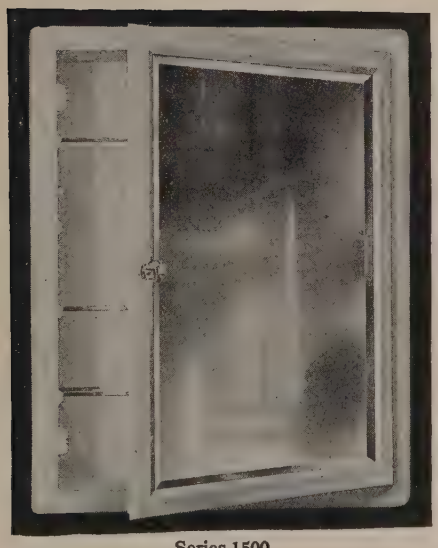
Substantial Door Knob and Catch—Door knob is of ornamental glass. Door is fastened by means of a concealed bullet catch.

Best Quality Plate Glass Mirrors—Mirrors are high grade, double plate, mounted on inside of door and completely encased.

High Grade White Enamel Finish—All exposed parts of the cabinet are finished in a permanent white pyroxylin finish.



Series 5500



Series 1500

Utility Cabinet

Cat. No.	Wall Opening	Overall	Mirror	Cat. No.	Wall Opening	Overall	Mirror
4500	14½ x 18½	17 x 21	10 x 14	#1601-A	16½ x 22½	19 x 25	14 x 14
4500-A	14½ x 18½	17 x 21	12 x 16	#1602-A	19 x 25	21 x 27	16 x 16
4501	16½ x 20½	19 x 23	12 x 16	#1604-A	16½ x 26½	19 x 29	14 x 18
4501-A	16½ x 20½	19 x 23	14 x 18	2500	14½ x 18½		16½ x 23½
1500	14½ x 18½	17 x 21	10 x 14	2501	16½ x 20½		18½ x 25½
1500-A	14½ x 18½	17 x 21	12 x 16	2502	19 x 25	Venetian	21 x 30
1501	16½ x 20½	19 x 23	12 x 16	2503	16½ x 22½	Mirror	18½ x 25½
1501-A	16½ x 20½	19 x 23	14 x 18	5500	14½ x 18½	Cabinets	16 x 20
1502-A	19 x 25	21 x 27	16 x 22	5501	16½ x 20½		18 x 22
1503	16½ x 22½	19 x 25	14 x 20	5503	16½ x 22½		18 x 24
900	For Wall	17 x 21	10 x 14	¶5499	12½ x 16½		14 x 18
900-A	Mounting	17 x 21	12 x 16	*1000	14½ x 36	17 x 38½	No Mirror

*Utility Cabinet. #Open Shelf Type. ¶No Engraving on Mirror.

UNITED METAL BOX CO., Inc., 473-491 President St., Brooklyn, N. Y.

Automatic Cellar Drainer and Sump Pump

Made by PENBERTHY INJECTOR COMPANY

DETROIT, MICH.

Manufacturers of Automatic Injectors, Sump Pumps and Cellar Drainers

Canadian Factory: WINDSOR, ONTARIO, CANADA

Established 1886

PENBERTHY AUTOMATIC ELECTRIC SUMP PUMPS

Cut No. 391
Model 1E

In spite of our efficient municipal sewerage systems, there are numerous places where water accumulates by seepage, overflow, flood or backing up, that cannot be drained off directly, either because the flow line of the sewer is not deep enough or because obstacles intervene between the sump and the sewer.

Among the more common instances may be mentioned the cellars of residences where no sewers exist, or where the sewer line is above the basement floor level or deep cellars of buildings, boiler rooms, settling basins, fly wheel and elevator sumps, tunnels, and scale pits.

While ordinarily this seepage may amount to only a small trickle, its flow is continuous and if neglected the accumulated water soon becomes a real menace to health and property.

To keep such places dry, the incoming water is most economically disposed of as it accumulates, either by an automatic hydraulic cellar drainer (water operated) or an automatic electric sump pump (electrically operated). Local conditions determine which is preferable.

Penberthy manufactures a complete line of both types, and can consequently supply the unit best suited to meet requirements.

Conditions favoring the electric pump are:

1. For districts where city water pressure is not available, or at least very low.
2. Larger quantities of seepage water to be handled.
3. Discharge heads up to 20 feet.
4. Low cost of operation.

Cut No. 393
Model 2E

PENBERTHY PRODUCTS

TRADE MARK

PENBERTHY AUTOMATIC CELLAR DRAINERS
(Water Operated)

Cut 381
Model R

Cut 367
Model L

Table of Capacities at Different Pressures and Elevations, Pipe Sizes, Etc., Model "R"

Size and Model	Pipe Sizes		Working Head in Feet	Maximum Net Capacities from Sump in Gallons per Hour at 10 to 100 Pounds Water Pressure								
	Supply	Discharge		10	15	20	25	30	40	60	80	100
No. 1 Model R	½ inch	1 inch	3	80	210	300	340	400	510	700	720	700
			6		90	140	240	300	390	570	670	690
			9			90	150	210	330	480	620	660
			12				100	150	220	390	550	630
			15					90	190	300	450	600
			18						120	250	320	550
No. 2 Model R	¾ inch	1¼ inch	3	190	390	550	620	750	910	1180	1240	1220
			6		210	340	420	600	750	1020	1140	1200
			9			210	300	380	540	900	1090	1150
			12				210	300	420	780	1020	1110
			15					210	370	570	940	1050
			18						300	510	850	970

Unless otherwise specified, the model "R" drainer (see cut No. 381) is supplied and used for all conditions as printed in bold face type as shown in the table of capacities (see table above).

For conditions below bold face type we furnish a low pressure drainer.

The model "R" drainer requires 5-pound water pressure or more for each one foot of elevation, while the low pressure drainer will work on 2-pound to 4-pound per foot of elevation, which we can supply from factory.

Water Consumption—Model "R"

Working Head in Feet	Approximate Gals. or Fractional Gals. of Pressure Water Required to Pump One Gal. from Sump with a Model "R" Drainer							
	10 lbs.	15 lbs.	20 lbs.	30 lbs.	40 lbs.	60 lbs.	80 lbs.	100 lbs.
3	.80	.50	.40	.38	.35	.30	.30	.35
6		.90	.75	.50	.42	.38	.38	.40
9			1.00	.65	.50	.45	.40	.41
12	For conditions below bold face type we can furnish a special Drainer			.90	.65	.52	.45	.42
15				1.20	.85	.60	.50	.43
18					1.00	.70	.55	.45

List Prices, Specifications, Etc.

Size No.	List Price	Pipe Connection	Approximate Discharge Capacities, Gals. per Hour				Operating Cost per Hour	Size Motor H. P.	Weight Boxed Lbs.
			5-Ft. Lift	10-Ft. Lift	15-Ft. Lift	20-Ft. Lift			
1E	$ 65.00	¾ in.	900	700	500	250	¾ cts.	1/15	50
2E	$100.00	1 in.	2000	1700	1100	500	1½ cts.	¼	70

List Prices—Model "R" and Model "L"

Size No. and Model	Model "R"		Model "L"		
	1	2	3	4	5
List Price	$25.00	$40.00	$55.00	$80.00	$110.00

Capacities, etc., for Model "L" furnished on request.

PENBERTHY INJECTOR CO., Detroit, Mich.

CRANE Plumbing and Heating Materials for Every Purpose

FOR BATHROOM FIXTURES SEE PAGES 214-219

Soft Water, Running Water, for City or Farm Homes

The C. W. Softener

Here is a water softener of Crane quality at a price that everyone can afford. Skillfully designed and engineered, it functions perfectly and will stand up for many years. The cast iron tank is flanged at the top to provide easy access to the interior should that ever be necessary. Price, F. O. B. Factory, $135.

Perhaps as important advances as have recently been made in the plumbing field are the developments in water softeners and automatic water systems.

The first puts the many benefits of soft water within the reach of homes, barber shops, beauty parlors, restaurants, clubs, laundries, bottling works, and industrial plants. The second puts the advantages of running water, and incidentally of all modern plumbing, at the service of homes, clubs, hotels, schools, which are out of reach of city water mains.

Both these improvements, opening new markets and making possible the building of more comfortable, more saleable homes, are of great interest not only to the public but to contractors, dealers, and speculative builders.

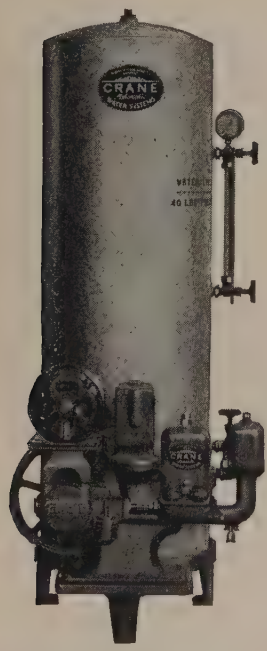
Crane-Warlo Water Softeners

Crane-Warlo Water Softeners function simply by passing water of any degree of hardness through a bed of softening mineral. Long study has brought the carefully prepared Crane-Warlo softening mineral to an extremely high state of efficiency and an unlimited durability. The mechanical parts have been planned to give the greatest convenience and a lifetime of service.

The S. A. 22

Both the softener and brine tanks of this semi-automatic softener are made of corrosion resisting cast iron. A single control valve makes operation so easy that it can be cared for by any member in the household. Price F. O. B. Factory, $185.

All that is necessary for anyone to have soft water is to hook a Crane-Warlo into the water lines, and occasionally afterward restore the mineral to its original efficiency through a salt wash, which is termed regeneration. Outside of the brief time needed for regeneration, no attention is required. The Electro-Matic eliminates even that; it regenerates automatically.



Shallow Well System No. 215-A

200 gallons an hour capacity. 42-gallon tank. 1/6 h.p. motor. Complete f.o.b. factory, $120. Other shallow and deep well models, in many capacities, to meet a great variety of conditions, at prices ranging as low as $85.

Crane Automatic Water Systems

Crane Automatic Water Systems are self-contained plumbing units which make running water available anywhere at the turn of a faucet. They are made in all sizes and capacities, pumping from 200 to 6,000 gallons an hour; in two types, shallow well for a vertical lift up to 22 feet and deep well for a lift up to 250 feet; and operate by either electric or gas engine power.

Every Crane system is simple and durable. Parts are oversize for greater strength. Bearings are machined to .0005 of an inch. A wrench is the entire tool kit.

The 74-year Crane reputation stands behind every Crane water system and every Crane-Warlo softener. A request will bring full information regarding either. Or our experts will personally study any set of circumstances and recommend the proper size and type.

The Electro-Matic

Now, a softener as convenient as electric refrigeration. A softener that saves the time and trouble ordinarily needed to watch valves during regeneration. When 100 pounds of salt have been used, a signal flag gives notice to refill the salt tank. There is a margin of five regenerations. Made in two sizes each, two types of control. Priced from $285 to $400 F. O. B. Factory.

CRANE CO., 836 So. Michigan Ave., Chicago, Ill.

Hoosier GalVAZink Water Systems

Manufactured by the FLINT & WALLING MANUFACTURING CO.

42 Oak Street, KENDALLVILLE, INDIANA

The Hoosier Line

The Hoosier line includes electrically driven automatic water service installations for use with shallow or deep wells, as well as water systems for use with gas engine or other belt power units. Power driven pumps and working heads for all purposes.

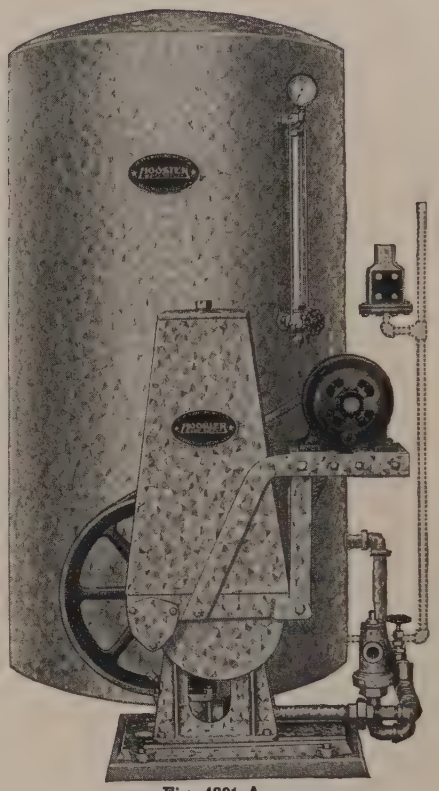


Fig. 4801-A

For Shallow Wells and Cisterns

The HOOSIER WATER SERVICE installation illustrated at the bottom, left-hand portion of this page is designed for use in connection with shallow wells and cisterns. This service is made in a number of sizes, providing a complete, compact automatic water supply especially suited for the home owner who does not have municipal water service available.

Construction

HOOSIER electrical systems are equipped with Refrigeration Type Motor, designed to start and operate continuously, if necessary, at full load without overheating. Rubber cushion mounting for motor which absorbs starting shocks and gives unusual smooth and quiet operation. V-belt drive, which does away with the need for noisy idlers. Practically no attention is necessary. Entirely automatic. Protected from dampness and corrosion. Built for a life-time of efficient, satisfactory service and perfect satisfaction to the user. Economic to operate. Consumes minimum amount of current.

To the right is shown one of the deep well installations, Timken Tapered Roller Bearing equipped, using electric current. Automatically controlled. Complete in every detail. All-galvanized finish inside and out. Rust resisting. Has all the HOOSIER features of construction.

Power Supply

Hoosier electrical installations operate from current as provided by central power stations, or from farm lighting plants. Hoosier installation services are also made for gasoline motor power, as well as installations where power is provided by STAR windmills.

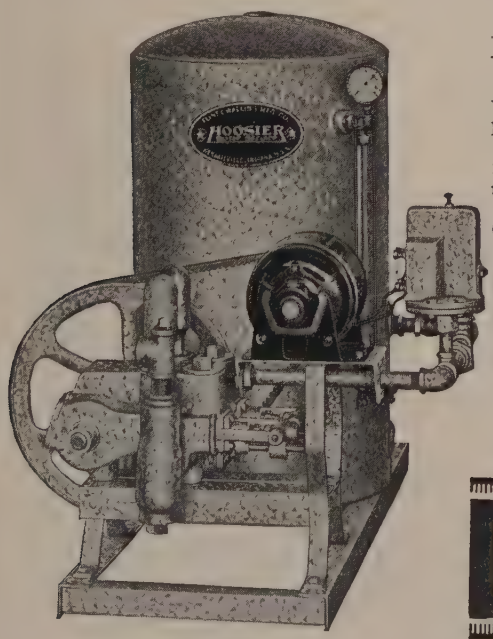


Fig. 231

No Mixture of Oil and Water

All moving parts run in a constant bath of oil, yet the pump is so designed that water cannot escape into crankcase and dilute the oil. Also, no oil can get into pumping cylinder to pollute the water supply.

If desired, Hoosier installations may be had for supplying fresh water, direct from the well. Can be used for drinking or culinary purposes as well as general utility.

GalVAZink Protection

Hoosier installations are protected against rust and corrosion by the famous GalVAZink finish. This heavily zinced surface, applied by our hot-dip process, is a superior finish capable of making entire system immune from disintegration. Very easily cleaned. Very durable.

Write for Catalog

Catalog describing this complete line, as well as other information useful to those needing or contemplating a domestic water supply, will be sent promptly upon request.

GALVAZINK PUMPS
★STAR★WINDMILLS
REGISTERED TRADE MARKS

FLINT & WALLING MFG. CO., 42 Oak Street, Kendallville, Indiana

MYERS SELF-OILING WATER SYSTEMS AND POWER PUMPS

ESTABLISHED 1870

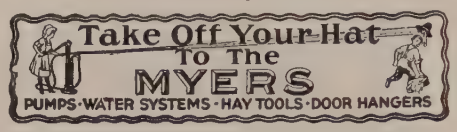
AGENCIES IN PRINCIPAL CITIES

Manufactured by THE F. E. MYERS & BRO. CO.

ASHLAND, OHIO

Myers "Honor-Bilt" Products

Well, House and Cistern Pumps, Tank Pumps, Pump Stands and Pumping Jacks, Hand and Power Water Systems, Self-Oiling Power Pumps, Cylinders and Accessories.



Myers "Honor-Bilt" Products

Hand and Power Spray Pumps. Nozzles and Fittings, Auto Washers, Hay and Grain Unloading Tools, Barn and Garage Door Hangers, Store Ladders, Etc., Etc.

Myers Self-Oiling Water Systems and Power Pumps are made in a complete line—for home, farm or country estate—summer cottage, camp, service station, hotel or golf course—school, church or hospital—mill, mine or factory. Whether the water supply source is deep or shallow—whether the outfit is to be operated by hand, wind, engine or motor—whether the installation is to be protected or exposed to the weather—there is a dependable Myers Water System or Power Pump for the purpose in capacity range from 200 to 10,000 gallons per hour.

Myers Self-Oiling Electric Water Systems are especially convenient. Powered by the home lighting and power plant or by current from high lines they require little or no attention and are economical, thoroughly safe and efficient. Some styles are furnished with tanks, while others pump the water from the well or cistern direct to the faucets. Self-starting, self-stopping, self-oiling—complete automatic control—insures dependable and continuous water service for household use, for barns and feed lots, for sprinkling, machine washing and fire protection.

A few of the more popular types of Myers Self-Oiling Water Systems and Power Pumps appear on this and the following page. Contractors, dealers, plumbers and electrical equipment stores everywhere sell and install Myers Water Systems. There is one near you who will be glad to give you complete information and assist you in selecting a Myers System that will meet your individual requirements. See him by all means before you make a selection, or if you prefer write our Engineering Department for catalog and free advice.

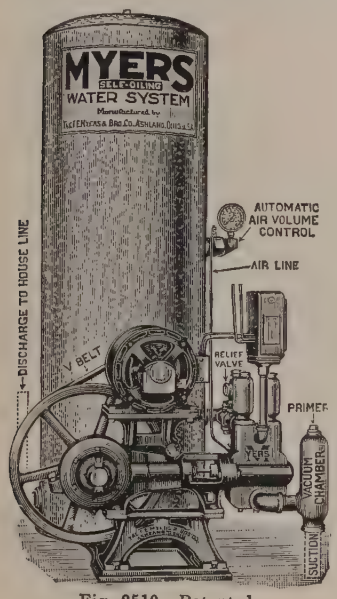


Fig. 2510—Patented

Myers Self-Oiling Home Water Systems

For Shallow Wells or Cisterns

Automatically Controlled

Fig. 2510

Where not over 250 or 300 gallons of water per hour are needed for household, sanitary and other requirements, this is the ideal system. Low in price, easily installed, with a minimum of cost to maintain, the service it renders is within the reach of any home, farm, summer cottage or similar installation. Two sizes—250 and 300 gallons per hour—complete as pictured ready to install—operation by city current, or farm power lighting plant. Thoroughly reliable, efficient and economical.

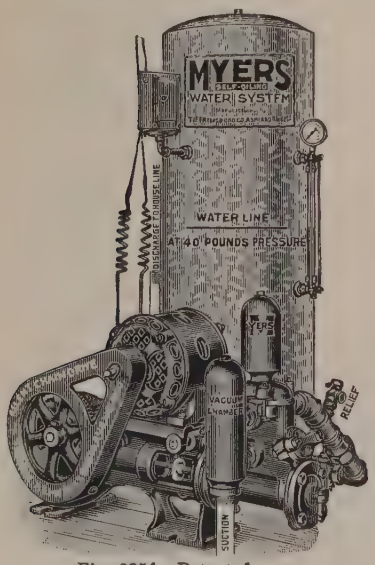


Fig. 2354—Patented

Myers Self-Oiling Belt or Silent Chain Drive Shallow Well Water System

Automatically Controlled

No. 2354

A large capacity, self-oiling automatic unit for wells or cisterns not to exceed 24 feet in depth. Two sizes—500 and 1000 gallons per hour. Design, construction and special features lend themselves to ease of installation, simplicity of operation, dependability of service. An excellent outfit for public or private buildings, institutions, country estates, pleasure resorts and similar installations.

Myers Self-Oiling Belt or Silent Chain Drive Deep Well Water System

Automatically Controlled

Fig. 2511

A complete, large capacity, automatic unit for wells of over 24 feet in depth, developed and perfected by our water system experts to give those who must go deep for their water supply a neat, compact and efficient unit of ample capacity for large homes, estates, schools, creameries, dairies and similar purposes. Self-oiling, self-starting, self-stopping, we unhesitatingly recommend this Myers System.

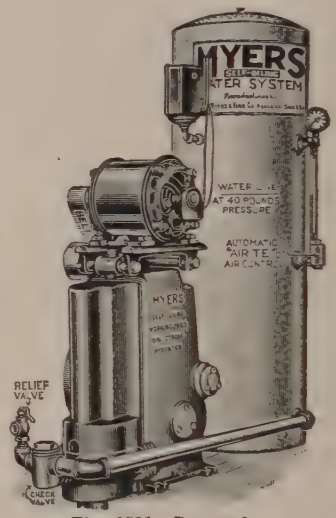


Fig. 2511—Patented

Myers Self-Oiling Belt or Silent Chain Drive Deep Well Water System

Automatically Controlled

Fig. 2357

Where a large volume of water is required from a source of supply beyond the depth of an ordinary suction pump this system is exceptionally desirable. Complete as pictured (except down or suction pipe and lower cylinder) it is ready to be connected with water and power lines. Size and strength, method of operation and automatic control, adaptation to a wide range of installations, economy of maintenance, high efficiency, make this system exceptionally desirable for any service up to one thousand gallons per hour.

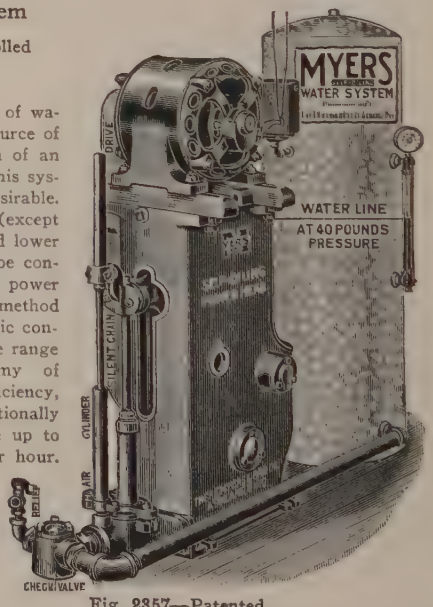


Fig. 2357—Patented

THE F. E. MYERS & BRO. CO., Ashland, Ohio

Myers Junior Self-Oiling Direct Water System

For Shallow Wells or Cisterns

Fig. 2508

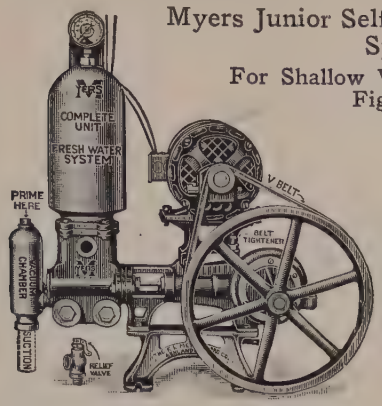


Fig. 2508—Patented

This system does not require a storage tank. It pumps the water fresh and cold from source of supply direct to faucets or taps. Designed for operation by city current or by farm light and power plants. Two sizes 250 and 300 gallons per hour, complete as pictured ready to connect to water and power lines. Will provide an abundance of water at an extremely low cost for homes, farms, summer cottages and similar places. Dependable as the day is long.

Myers Self-Oiling Belt or Silent Chain Drive Direct Water Systems

For Shallow Wells

Fig. 2353

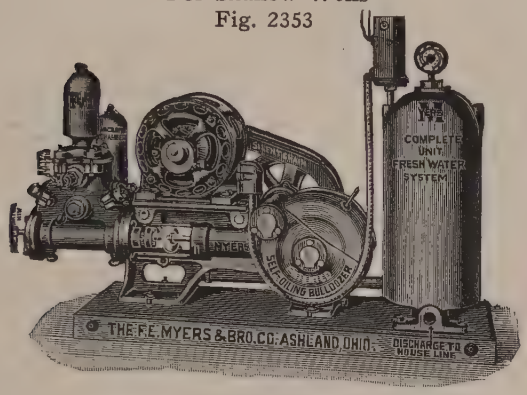


Fig. 2353—Patented

A proven outfit for homes, farms, country estates, public and private buildings and grounds, where the depth of well or cistern does not exceed 24 feet and the volume of water required not over 500 gallons per hour. Motor driven, automatically controlled, no storage tank, pumps water direct to faucets. Complete as pictured ready to connect to water and power lines. Popular with users everywhere.

Myers Self-Oiling Belt or Silent Chain Drive Direct Water Systems for Deep Wells

Fig. 2450

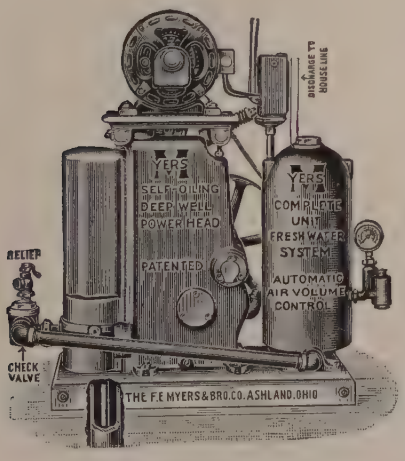


Fig. 2450—Patented

A rugged and compact deep well outfit, complete as pictured (except down or suction pipe and lower cylinder) ready to install. Motor driven, automatically controlled, no storage tank, pumps water direct to faucets or taps, capacity varies with depth of well and size of cylinder. Has sufficient volume for all ordinary needs and will supply a Gem nozzle for sprinkling and similar service. A deep well system of exceptional merit.

Myers Self-Oiling Power Pumps For Shallow and Deep Well Service—Continuous Operation Without Attention

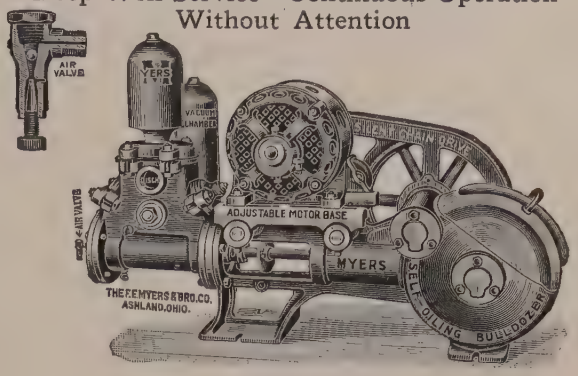


Fig. 2346—Patented

Myers Self-Oiling Power Pumps have been developed by pump experts of long experience. They represent a revolutionary advance in pump design which has created a new standard of power water service that cannot be compared with power water facilities of but a few years ago.

Positive self-lubrication, housed working parts, larger valves, improved method of power application and other late features, permit operation at higher speed, increase the volume of water over older types, reduce wear and breakage to the minimum, lower operation and maintenance cost and prolong service years.

They are designed for general service in all fields of human endeavor—twelve sizes for shallow wells—five sizes for deep wells—with capacities up to ten thousand gallons per hour—give users the opportunity of selection for individual needs. The tens of thousands already in service is a wonderful testimonial of the general satisfaction Myers Self-Oiling Power Pumps are giving those who depend on them for their daily water supply.

Myers Self-Oiling Power Pumps can be installed anywhere. They are equipped complete with motor for either belt or chain drive or are furnished without motor for engine, belt, gear or chain drive. When desired they are provided with an air valve or air cylinder for use with pressure tanks. They meet depth, volume, motive and maintenance requirements. And whether used for home or farm, or for school, college, hotel, mill or factory, they give unvarying satisfaction. Our Engineering Department solicits, without obligation on your part, the opportunity to help solve your water problems.

Fig. 2358—Patented

Myers Door Hangers

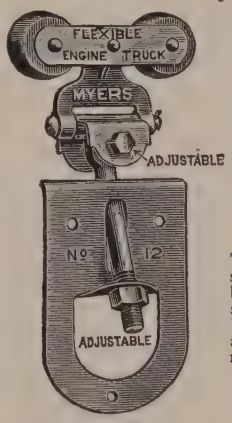


Fig. 2156

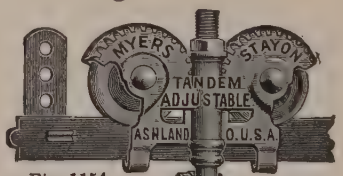


Fig. 1154

Stayon and Tubular styles for sliding doors on barns, garages, sheds and other buildings—Catalog and information on request.

Fig. 2159

Fig. 998

THE F. E. MYERS & BRO. CO., Ashland, O.

San-Equip Sewage Disposal Service

CHEMICAL TOILET CORPORATION

952 E. Brighton at Glen Ave., Syracuse, New York

If you are building beyond city sewer lines, your first thought should be for safe sewage disposal. Health protection for home and family depends upon careful installation of reliable equipment. You cannot afford to take a chance on an out-of-date or inefficient system.

SAN–EQUIP provides equipment and service that insures the complete protection of safe sewage disposal. It is the first choice of those who care. Dependability has been proven by years of use—prominent authorities recommend the scientific design and construction.

In SAN–EQUIP Septic Systems the sewage is liquefied and partially purified by bacteria or septic action within the tank. The treated liquid then drains to the filter bed or seepage pool for final disposal.

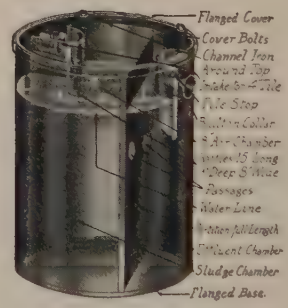
Ask Your Dealer for Details

SAN–EQUIP service is available everywhere in U. S. and Canada. Your builder or plumbing dealer can give you complete information. Ask him to secure your SAN–EQUIP right along with the other plumbing. He can get one of these time-tested septics promptly from his jobber or from one of our nearby warehouses.

San-Equip *Security Septic System*

This is the original SAN–EQUIP Septic System which has become the standard for satisfactory service throughout the country. For many years these septics have provided health protection for thousands of homes—not a failure among them. Dependability and durability have been time tested.

SAN–EQUIP Service makes the home more attractive to family and friends. It increases property values. It provides an invaluable safeguard to health.



DESIGN — Follows U. S. Public Health Service specifications. Now improved for even greater durability and efficiency.

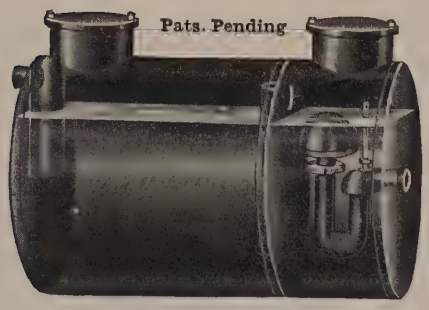
MATERIALS—Special rust-resisting copperoid iron—protected from moisture, acids and soil by a heavy enamel of mineral asphalt melted on inside and out.

No.	Total Capacity Gallons	Working Capacity Gallons	No. of People			Dimensions	Shipping Wgt. Lbs.	Price
			Home	School	Factory			
402	245	200	7	15	12	38″ x 48″	295	$ 36.00
403	360	300	10	25	20	48″ x 48″	325	48.00
405	550	500	25	40	35	52″ x 60″	420	84.00
410	1150	1000	50	80	70	52″ x 10′	950	164.00
915	1725	1500	75	120	105	52″ x 15′	1300	244.00
920	2300	2000	100	165	140	69″ x 11′8″	2400	328.00
925	2875	2500	125	210	175	69″ x 14′7″	2850	408.00
930	3450	3000	150	250	200	69″ x 17′6″	3300	488.00
935	40 5	3500	175	290	235	69″ x 20′5″	3750	568.00
940	4600	4000	200	330	270	69″ x 23′4″	4200	648.00
945	5175	4500	225	370	305	69″ x 26′3″	4650	728.00
950	5750	5000	250	410	340	69″ x 29′2″	5100	800.00

Ask for blue prints of larger systems up to 10,000 gallons

CHEMICAL TOILET CORP., 952 E. Brighton at Glen Ave., Syracuse, N. Y.

San-Equip *Siphon Septic System*



Improved Septic Disposal

This SAN–EQUIP System represents the latest improvement in septic tank design and construction. Health authorities have long recognized the advantage of a siphon discharge. But, up to this time, these installations have been too expensive for common use.

Now, the septic process and siphon discharge are combined in one compact SAN–EQUIP unit—at a cost within reach of every unsewered home. Digestion of sewage is as complete as ever—drainage is greatly improved.

The siphon provides for the intermittent discharge of effluent to the filter bed, flushing the liquid throughout the absorption field for 100% drainage. Intervals of rest between discharges improve condition of absorption field and provide a safer disposal service at all times.

SAN–EQUIP Siphon Septics are made of the same high-grade materials as the Security Septics. Siphon fully assembled within tank—no extra connections to make. Ask your plumbing dealer for complete information.

No.	Net Gal.	Siphon Discharge Gal.	No. of People			Dimensions	Shipping Wgt. Lbs.	Price
			Home	School	Factory			
703	240	60	7	15	12	48″ x 48″	400	$ 76.00
705	350	80	12	25	25	52″ x 60″	495	112.00
707	550	120	25	50	40	52″ x 90″	695	156.00
710	750	160	40	75	60	52″ x 10′	1025	196.00
715	1125	225	70	110	95	52″ x 15′	1375	272.00
720	1500	300	85	155	130	69″ x 11′8″	2475	368.00
725	1875	375	115	200	170	69″ x 14′7″	2975	448.00
730	2250	450	140	245	200	69″ x 17′6″	3425	528.00
735	2625	525	170	290	235	69″ x 20′5″	3875	608.00
740	3000	600	195	330	270	69″ x 23′4″	4325	688.00
745	3375	625	220	370	305	69″ x 26′3″	4775	768.00
750	3750	750	250	410	340	69″ x 29′2″	5225	840.00

Furnished in all sizes up to 10,000 gallons. Ask for blue prints

San-Equip

Self-Drain Waterless Toilet System

For Camps, Summer Homes, and Cottages

Where the water supply is limited, SAN–EQUIP Self-Drain Waterless Systems provide sanitary indoor toilets. New features, exclusive with SAN–EQUIP, improve the service and satisfaction of this chemical process of sewage disposal.

All openings are liquid-sealed to eliminate odors. Self-drain feature provides for automatic discharge of treated sewage. Occasional charge of chemical only attention required. Easily installed.

Sizes and Ratings of Self-Drain, Liquid Seal Systems

No.	Capacity Gallons	Rating No. of People			Size of Tanks		Shipping Weight	List Price
		Home	School	Mill	Dia. Ins.	Lgth. Ins.		
560B	60	4			22½	36	200	$64.00
580B	80	7	15	12	22½	48	275	76.00
5128B	128	12	25	20	28	48	325	88.00
5129B —as 5128B except has 20′ Vent for 2 story dwellings								90.00
561M—as 560B except has Metal Hopper replacing china bowl								48.00
581M—as 580B except has Metal Hopper replacing china bowl								60.00
5128M—as 5128B except has Metal Hopper replacing china bowl								72.00

CHEMICAL TOILET CORP., 952 E. Brighton at Glen Ave., Syracuse, N. Y.

KAUSTINE COMPANY, Inc.

Manufacturers and Sanitation Engineers

Manufacturers of KAUSTINE ARMCO INGOT IRON SEPTIC TANKS
KAUSTINE SUPER-SEPTIC TANKS KAUSTINE SYSTEM TOILETS

Offices and Factory, PERRY, N. Y.

MODERNIZE YOUR HOME

No matter where your home is situated, you can now provide every member of it with all the sanitary and modern conveniences. Aside from the satisfaction afforded, you owe your family the protection to health which all Kaustine Sewage Equipment gives.

All Kaustine tanks are made of the well-known rust-resisting, corrosion-proof enameled Armco Ingot Iron.

Kaustine Septic Tanks are made in two styles, Kaustine Armco Ingot Iron Septic Tanks, and Kaustine Super-Septic Tanks.

Kaustine Armco Ingot Iron Septic Tanks

Kaustine Armco Ingot Iron Septic Tanks are constructed of Armco Ingot Iron throughout and coated with Hermastic Enamel. This furnishes you with a tank made of special materials at the same price ordinary tanks are sold. The tank is correct in design and made under expert supervision by experienced workmen. On account of the rust-resisting qualities of Armco Ingot Iron, Kaustine tanks are known for their longer periods of service.

Aside from these features the tank is leak-proof and unaffected by frost action. You therefore have a tank that will afford the necessary protection to the health of your family.

The enameled coating which is unaffected by acids and gases, gives added protection to the tank against any possibility of corrosion.

VERTICAL TANKS

Cat. No.	Net Gallons	Dimensions Diam.–Depth Inches	No. of Persons Accommodated				Weight Lbs.
			Home	Hotel	Factory	School	
62	200	38 x 48	7	8	12	15	260
63	320	48 x 48	10	12	20	25	330

HORIZONTAL TANKS

Cat. No.	Net Gallons	Dimensions Diam.,Length Inches	No. of Persons Accommodated				Weight Lbs.
			Home	Hotel	Factory	School	
82	200	38 x 48	7	8	12	15	260
85	500	52 x 60	—	25	35	40	395
810	1000	52 x 120	—	50	70	80	845
815	1500	52 x 180	—	75	105	120	1150
820	2000	68 x 144	—	100	140	165	2270
825	2500	68 x 180	—	125	175	210	2675
830	3000	68 x 216	—	150	200	250	3095
835	3500	68 x 252	—	175	235	290	3525
840	4000	68 x 288	—	200	270	330	3945
845	4500	68 x 324	—	225	305	370	4365
850	5000	68 x 360	—	250	340	410	4800

An Engineering Department is maintained at our main office for the purpose of assisting you in the selection and installation of the proper type of tank. This department will furnish advice and plans free for your particular problem. Write for specifications and plans.

Kaustine Super-Septic Tanks

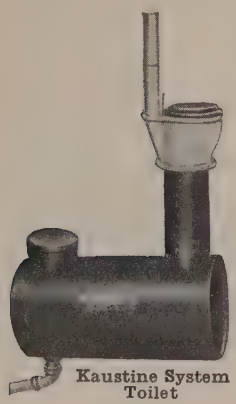
The Kaustine Super-Septic Tank is an improved type of tank, which on account of its patented internal baffle arrangement, furnishes a design found only in this type of tank. The internal baffle provides for the *flow of sewage* around the tank, thereby resulting in a clear effluent.

This tank, like all Kaustine tanks, is constructed of heavy gauge Armco Ingot Iron, and coated inside and outside with Hermastic Enamel. Distinctive in its design, Kaustine Super-Septic Tanks are the last word in sewage treatment for residences where public sewers are not available and a high degree of sewage purification is desired.

No. 112, 113, 114 are made of 12 gauge Iron
No. 115, 116, 117 are made of 10 gauge Iron

Cat. No.	Dimensions Inches	Total Capacity Gals.	Working Capacity Gals.	Number of Persons Designed to Accommodate				Approx. Ship. Weight Lbs.
				Home	Hotel	Factory	School	
112	38 x 50	245	200	7	8	12	15	295
113	48 x 50	390	320	10	15	20	25	470
114	55 x 60	615	535	17	25	35	40	800
115	65 x 60	860	735	25	35	45	60	1290
116	75 x 60	1150	1000	35	50	70	80	1650
117	92 x 60	1700	1500	50	75	105	125	1950

Order your Kaustine tank from your plumber, if you wish to secure the finest material and the latest design in sewage disposal equipment at the lowest prices.



Kaustine System Toilet

Kaustine System Toilets

If a water supply under pressure is not available, and the conveniences of an indoor toilet are desired, the Kaustine System Toilet is recommended. This toilet is furnished in two styles — the Kaustine System Toilet of the chemical type wherein a charge of the Kaustine System Toilet of the strong disinfecting chemical is used, and the Kaustine System Toilet of septic type, which operates similarly to the septic tank installation but without running water. Both of these systems are easy to install, efficient to operate, economical in upkeep and sanitary in every detail. They furnish a means of sewage disposal within the reach of every home owner.

KAUSTINE COMPANY, Inc., Perry, N. Y.

Sanitary Sewage Disposal Systems

Made by WESTERN METAL SPECIALTY COMPANY

3020 Calhoun Place, MILWAUKEE, WIS.

Wemsco Septic Tanks

Flanged Removable Cover

Septic tanks are used for homes, cottages, etc., where there is running water and no sewage system.

The Wemsco septic tank is designed for proper septic action and to assist and expedite the natural process of decomposition and to remove the greater part of solids from sewage by liquefaction. These tanks are guaranteed to function properly and efficiently.

The regular Wemsco tank has a flat cover while the Wemsco "adjustable" tank has a 14" opening in the center of the cover which can be extended any distance with pipe furnished for that purpose in one or two foot lengths. This improvement is made so as to allow inspection of tank and possible removal of sludge in cases where top of tank is a considerable distance below ground. Extension is also furnished with removable cover.

Description:

Wemsco septic tanks are made of 14 ga. copper bearing rust-resisting iron, coated inside and outside with a waterproof and rust-proof enamel. All seams are electrically welded.

Sizes and Capacity of Wemsco Septic Tanks

No.	Diameter	Height	Capacity	No. Persons	Shpg. Weight
1	38	48	215	7	210
2	46	48	340	12	305
3	48	72	560	20	395

Chemical toilets are used where there are no sewage facilities or running water; the only water being used is sufficient quantity to mix with chemical used in tank.

The chemical thoroughly sterilizes and deodorizes contents of toilet and liquefies same so as to facilitate draining.

These Toilets are Thoroughly Sanitary and Odorless.

Patent Agitator Feature:

Proper operation of any chemical toilet depends upon constant agitation and in order to assure that we have a patent arrangement whereby the agitator is attached to the seat cover so that whenever the cover is raised or lowered the contents of tank are agitated. **This is an Exclusive Feature of our Toilets.**

Our Toilets are Self-Draining:

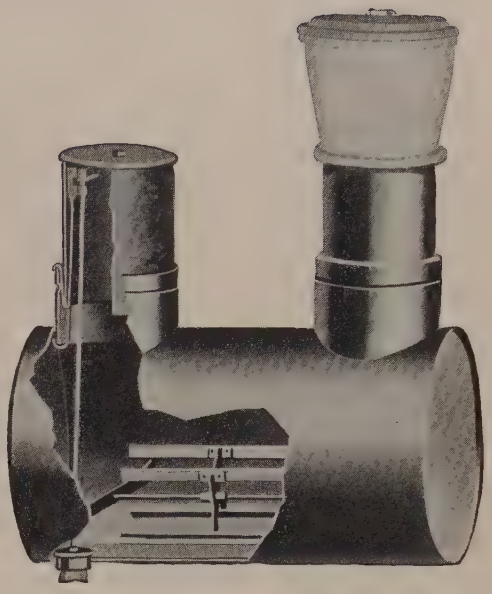
All of these toilets are equipped with a valve attached to a rod, easily accessible, which is released by a turn of the hand—valve raised for a few minutes, when it becomes necessary to drain tank. Valve is then again put in place by a similar operation, a new charge of chemical put into tank, and toilet is again ready for use.

Contents of tank are disposed of by draining same into a drywell provided for that purpose which can be made out of cement or furnished of steel by us.

The **Standard Automatics** are made in any capacity from 150 gallons up and are used in schools, public buildings and factories.

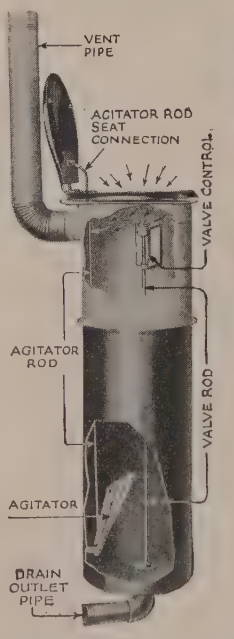
The CHEM-O-LET is intended for suburban and farm homes, summer cottages and camps.

Standard Automatics



Standard Automatics made of 14 gauge rust-resisting metal have all seams electrically welded, painted with a heavy coat of rust and water-proof black enamel and are furnished with bowl-seat and cover—ventilating pipe to the roof—one charge of chemical.

Chem-o-Lets are furnished in two types; one with steel enameled bowl and the other with vitreous china bowl, fully equipped with 25 gallon tanks—all necessary ventilating pipe—roof safe and cap—skirt pipe—iron elbow—chemical. These toilets are easily installed and cost less than an ordinary outhouse.



Type "F" Chem-o-Let

Showing Chem-o-Let installation with our steel drywell.

Send for Booklet "B" giving complete information. Sold by Hardware Dealers and Plumbers.

WESTERN METAL SPECIALTY CO., 3020 Calhoun Place, Milwaukee, Wis.

Factors Which Make Warm Air the Most Satisfactory and Desirable Heating System

Healthful Heat

Home health and comfort depend upon the proper degree of warmth, humidity and air motion. It must be conceded that any type of heating system will raise the temperature of the room, but WARM AIR alone affords WARM, MOIST, RECIRCULATING AIR. A room at 70° with ample moisture in the air is vastly more pleasant and has a greater feeling of warmth than dry air at 75°.

Homes heated with Warm Air are protected against the ills which come from sudden weather changes, from disease which breeds in stagnant air, from the unhealthful effects of dead, dry air.

Because a Warm Air System keeps the atmosphere of the entire house in motion it should be installed as a simple matter of health.

Make certain that you obtain a Standard Code Installation by going to the dealer displaying this symbol. It is your assurance of a scientific installation, high-grade workmanship, fair prices and fulfillment of the Code Specifications.

Warm Air Heating has been placed upon a scientific basis by eight years of research work carried on in this house under the auspices of the National Warm Air Heating and Ventilating Association in co-operation with the University of Illinois. This exhaustive research resulted in the "Standard Code" now in general use.

Economical

The Warm Air furnace burns all types of fuels—hard and soft coal, coke, wood, gas, oil. Excepting oil and gas, these fuels operate successfully without change or rearrangement of the standard furnace. Fuel is converted into heat, which is delivered direct to the rooms to be heated. Because of this, Warm Air is the most economical system.

No Lost Floor Space—No Sacrifice of Beauty

Warm Air requires no bulky appliances demanding floor room. Unobtrusively, harmoniously, the warm air register adapts itself to any scheme of decoration.

Clean Heat

Warm Air, properly installed, is clean. No dust arises from registers to streak walls and ruin curtains and drapes, provided the furnace is set up by a competent installer.

Simple of Control

A Warm Air System is simple to control. It is flexible. It may be operated to afford just enough warmth to take the chill from the late spring air—or it will maintain a constant temperature of 70° in severest weather, flooding each room with healthful heat which assures winter well-being.

Safe

Warm Air is safe, avoiding the dangers and worries of many other systems.

Long Life

Warm Air Heating systems afford years of constant service, surprisingly free from repairs or replacements.

Easily Installed

The Warm Air system is simple and easy of installation.

Before You Build Investigate Thoroughly the Possibilities of Warm Air

The farther one proceeds with an investigation of Warm Air Heating, installed according to the Standard Code, the wider is the vista of its numerous advantages.

For health, home-comfort, efficiency cleanliness, ease of regulation and economy, insist on Warm Air Heat. But the furnace and fittings must be installed "According to the Standard Code" to obtain these benefits with the triple endorsement of this Association, the Furnace Manufacturer and the Dealer, that the installation will provide an inside temperature of 70° in every room with sub-zero weather outside.

Send us your name and we'll send you free of charge an interesting booklet of valuable facts about home heating.

NATIONAL WARM AIR HEATING ASS'N, 174 E. Long St., Columbus, O.

Standard Code Regulating the Installation of Warm Air Heating Furnaces in Residences

Approved and Issued by Authority of

National Warm Air Heating Association

174 E. Long St., Columbus, Ohio

ARTICLE No. 1

Meaning of the Term "Gravity Warm Air Furnace Heating System"

Gravity warm air furnace heating systems, to which this code refers. shall consist of one or more warm air furnaces, enclosed within casings, together with necessary appurtenances thereto, consisting of warm air pipes and fittings, cold air or recirculating pipes, ducts, boxes and fittings, smoke pipes and fittings, registers, borders, faces and grilles, the same being intended for heating buildings in which they may be installed.

ARTICLE No. 2

(a) The owner shall provide a chimney for the furnace constructed in a manner to comply with the following specifications.

(b) The chimney must be absolutely smoke tight throughout its entire length, and must extend at least three feet (3′) above a flat roof or two feet above the ridges of peak roofs.

(c) If built of a single thickness of brick or of cement blocks, it shall be lined throughout its entire length with fire clay flue lining, having not less than three-fourths inch (¾″) thickness. Flue lining to be laid in mortar and made air tight.

(d) The furnace flue must have no other opening for attaching any fireplace, furnace, stove, range, water heater, gas or ventilating connection.

(e) If necessary to offset the flue, it must be done in such a manner as not to reduce the cross sectional area or create a ledge or obstruction, where loose material may lodge.

(f) Its narrowest internal dimension shall not be less than eight inches (8″) and no flue smaller than 8″ x 8″ rectangular or eight (8″) diameter round will be considered suitable when hard coal is to be burned, or 8″ x 12″ rectangular or ten inch (10″) round for soft coal or wood.

(g) It is strongly recommended that nothing less than 8″ x 12″ internal dimensions be used in any case.

Note 1. It is recommended that the height above the furnace grade be not less than twenty-six feet (26′).

Note 2. It is strongly recommended that all new chimneys be built in strict accordance with the ordinance recommended by the National Board of Fire Underwriters.

ARTICLE No. 3

Method for Determining Sizes of Warm Air Pipes, Wall Stacks and Furnaces for Use in Residences

Method for Determining Sizes of Basement Warm Air Pipes

Section 1. Each First Floor Room

Divide square feet of glass by 12,
Divide square feet of net outside wall by 60 (See Table A),
Divide cubic contents by 800,
Add together the above and multiply by 9.
The result is the area of the basement pipe.

The sum of:		
Glass (sq. ft.) *(Note 4)*	÷ 12	×9=Area of Basement Pipe
Net Wall (sq. ft.) *(Note 5)*	÷ 60	
Cubic Contents	÷800	

Section 2. Each Second Floor Room

Divide square feet of glass by 12,
Divide square feet of net outside wall by 60 (See Table A),
Divide cubic contents by 800,
Add together the above and multiply by 6.
The result is the area of the basement pipe. (See Sec. 9, b.)

The sum of:		
Glass (sq. ft.) *(Note 4)*	÷ 12	×6=Area of Basement Pipe
Net Wall (sq. ft.) *(Note 5)*	÷ 60	
Cubic Contents	÷800	

Section 3. Each Third Floor Room

Divide square feet of glass by 12,
Divide square feet of net outside wall by 60 (See Table A),
Divide cubic contents by 800,
Add together the above and multiply by 5.
The result is the area of the basement pipe.

The sum of:		
Glass (sq. ft.) *(Note 4)*	÷ 12	×5=Area of Basement Pipe
Net Wall (sq. ft.) *(Note 5)*	÷ 60	
Cubic Contents	÷800	

Basis of Working Rules for Pipes

(a) These formulae are for 70 degrees temperature difference (outside temperature zero, inside temperature 70 degrees Fahrenheit). When temperature difference is more than 70 degrees, add 1½% per degree to final figures. When temperature difference is less than 70 degrees, deduct 1½% per degree from final figures.

(b) The values as given in Table A for use in the working rules, article 3, section 1-2 and 3 are derived as follows:

EXAMPLE:

The factor 60 in Table A, Item No. 1, is based upon a coefficient of heat transmission of 0.23 B.t.u. per square foot per degree difference per hour, thus:

$W \times 0.23 \times 70 \div 111$ = sq. in. first floor leader to compensate for the heat loss through walls only. In this, W = net area of exposed wall in sq. ft.; 0.23 = coefficient of transmission in B.t.u. per sq. ft. per degree difference per hr.; 70 = difference in temperature of air on inside and outside of wall; 111 = heat delivering capacity of one square inch of first floor leader pipe for a register temperature of 175° F. Reduced to its simplest approximate form this is

$$\frac{W \times 9}{60}$$

Likewise substitute 167 for second floor and 200 for third floor in place of 111.

The values in Table A for the different types of walls were obtained by substitution of proper coefficient of heat transmission instead of 0.23 in the above formula.

Table A

(The factor 60 used in the above example, is for buildings constructed as in item No. 1. When other types of walls are used substitute the appropriate factor as given below.)

No. 1.	Frame wall constructed of siding, paper, sheathing, studding, lath and plaster	60
No. 2.	Frame wall constructed of siding or stucco direct to sheathing (no paper), lath and plaster	52
No. 3.	9″ Brick Wall (no plaster)	40
No. 4.	9″ Brick Wall plastered one side	48
No. 5.	9″ Brick Wall, air space, furred and plastered	65
No. 6.	13″ Brick Wall, no plaster	53
No. 7.	13″ Brick Wall, plastered one side	57
No. 8.	13″ Brick Wall, air space, furred and plastered	75
No. 9.	4″ Brick, 4″ hollow tile, plastered	55
No. 10.	4″ Brick, paper, sheathing, studding, lath and plaster (brick veneer)	68
No. 11.	8″ Hollow tile, stucco and plaster	67
No. 12.	8″ Hollow tile, stucco furred and plastered	90

Roofs

No. 13.	1″ T. & G. Sheeting, Tar & Gravel	48
No. 14.	1″ T. & G. Sheeting & Composition roof	40
No. 15.	1″ T. & G. Sheeting & Tin	24
No. 16.	Corrugated Iron on strips	9.3

Ceilings

No. 17.	Lath and plaster without floor above	50
No. 18.	Lath and plaster with tight floor above	90
No. 19.	Metal without floor above	40
No. 20.	Metal with tight floor above	70

Method of Determining Size of Wall Stacks

Section 4. First Floor Rooms.
Same as Section 1.

Section 5. Second Floor Rooms.
Not less than 70% of basement pipe area as determined in Section 2.

Section 6. Third Floor Rooms.
Not less than 70% of basement pipe area as determined in Section 3.

Where two or more rooms are heated from the same basement pipe and stack, the area of such basement pipe and stack shall equal the combined areas as determined in Article 3, Section 1, 2, and 3.

NATIONAL WARM AIR HEATING ASS'N, 174 E. Long St., Columbus, O

Explanatory Notes

Note 3. In obtaining glass surface use full casement opening. An outside door is figured as glass.

Note 4. To obtain net outside wall multiply height by width and deduct the glass in all windows and outside doors. For all rooms with attic spaces immediately above full ceiling areas shall be taken into account, using Table A. Floors over unexcavated spaces shall be figured as 50% exposed wall and fully exposed floors shall be figured as 100% exposed wall.

Note 5. For rooms having unusual exposure, ordinarily north, northeast and northwest, add 15% to pipe area. For east and west exposure, add 10%.

Note 6. Use no basement warm air pipe less than 8 inches in diameter. If a basement warm air pipe figures greater area than any standard commercial size then the nearest commercial size shall be used, provided, however, that the total pipe area shall in no case be less than the total requirements according to Sec. 1, 2 and 3.

Note 7. It is understood in using the above values for determining basement warm air pipe areas, that these pipes should be run comparatively straight and that they should not be over 12 feet in length. Sharp turns and long pipes should have extra capacity. When warm air pipes exceed 12 ft. in length or have more than two 70 degree turns, the next larger commercial size pipe must be used.

Note 8. The value of 800 (used in cubic contents) is for an estimated air change of one room volume per hour. If it is desired to provide for 1½ room volume use the figure 600. If for 2 room volume use the figure 400.

Transition of Fittings to Stacks

Section 7. (a) Transition from warm air pipes to stacks or register heads shall be made with a well designed elbow or boot and no stack shall be less than 70% of the area of the warm air pipe leading to it.

(b) All first floor fittings and connections shall maintain a free area equal to the round basement pipes leading to them.

To Determine Size of Registers

Section 8. All registers shall have a free area at least equal to the area of the basement pipes leading to them.

Method for Determining Size of Furnace

Section 9. (a) Add together the areas (expressed in square inches) necessary for heating the building, as determined by the foregoing calculated requirements, Art. 3, Sec. 1, 2 and 3, and install a furnace, rated by the following formula.

Furnace Rating Formula

$$L = 1.75\ G\ (1 \div 0.02\ [R = 20])$$

L=square inches of warm air pipe connected to the furnace as calculated.

G=grate area in square inches; the area of the fire pot at the trade level; its most restricted area. R=ratio of heating surface area to grate area; 1.75=a constant based upon the results obtained in the Association Research on a furnace having 20 square feet of heating surface for each square foot of grate, and including factors for:

E=efficiency of heater;

C=combustion rate;

F=calorific value of fuel;

0.75=percentage of heat available at registers.

136 B.t.u. delivering value of one square inch of pipe, assuming half of the heat is sent to each floor. This value is based on an operating temperature of 175° F. at the register.

The formula allows 1.75 square inches of warm air pipe area for each square inch of grate area, for the furnace having a ratio of heating surface to grate surface of 20 to 1. For furnaces having other ratios of heating surfaces to grate surface, it adds 2 per cent or deducts 2 per cent for each unit above or below a ratio of 20.

Application:

		No. 1 Positive Correction	No. 2 No Correction	No. 3 Negative Correction
Grate area, sq. in.	=	346	346	346
Heating surface area sq. in.	=	7540	6920	5665
Ratio heating surface area to grate area	=	21.8 to 1	20.0 to 1	16.4 to 1
R—20	=	1.8	0.0	—3.6
Correction per cent	=	3.6	0.0	—7.2
1.75 G	=	606	606	606
L=1.75 F÷correction	=	628	606	562

Certified Measurements

Certified measurements on warm air furnaces together with the name and number of that furnace, will be issued by authority of the National Warm Air Heating Association, when, if and as, the grate areas and heating surfaces have been accurately measured and approved by the Research Advisory Committee.

(b) In Second floor duplex, flats or apartments where separate heating plants are used, add 50% to the total net calculated areas as determined in Art. 3, Sec. 5. This represents the required warm air pipe capacity in square inches of the furnace for the second floor.

(c) Every warm air furnace shall be equipped with a water pan or other humidifying device.

Gas or Oil-Fired Furnace

(d) In the application of any gas or oil-fired furnace to any warm air heating system, any deviation from the Standard Code shall apply only to the furnace itself.

ARTICLE No. 4

INSTALLATION

Location of Furnace

Section 1. The location of the furnace shall equalize the length of warm air runs as far as possible, yet give necessary preference to pipes supplying living rooms, dining rooms and main halls.

Foundation

Section 2. (a) Furnace foundation of brick, cement, or other incombustible material must be provided. Said foundation to extend at least fifteen (15") inches at rear and sides of furnace casing and at least thirty-six (36") inches in front of furnace casing. Foundation to be level.

(b) Where it is necessary to place a heater on a combustible floor, not less than four inches (4") of the hollow tile shall be used in every instance, having joints matched in such a way that air passage will be free from side to side, so that at no time will the removal of ashes or the handling of coal close up these openings. Such foundation shall be constructed upon, and covered with continuous sheet metal plates, of not less than No. 24 gauge metal, having all joints substantially riveted or double seamed and the bottom sheet to have the edges turned up at least one inch. This floor covering shall extend under the whole of the fire box and ash pit of the furnace and outwardly not less than two feet on all sides.

Setting or Assembling of Furnace

Section 3. (a) The base ring of the furnace shall be cemented to the foundation and cement flushed in around the back of the base ring, making an air tight joint. The furnace parts shall be assembled plumb and level, and in a workmanlike manner.

(b) All sections and joints shall be properly fitted. Joints requiring cement shall be well filled and all bolts shall be drawn up tightly.

Casings

Section 4. (a) Warm air Furnaces shall be enclosed in metal casings or walls of brick, tile or concrete.

(b) Portable. Sheet metal casings including casing tops or bonnets shall be made of galvanized sheets, not lighter than 26-U. S. Standard Gauge. They shall fit the castings and casing rings closely, so as to be dust tight, and shall be securely fastened to the front. The casing shall be lined from the upper casing ring down to a line on a level with the grate.

(c) When side collars are used the casing top or bonnet must be of sufficient height so that the largest warm air pipe can be taken from the side without ovaling. In no case shall a distance less than eight (8") inches be maintained between the top of any furnace and the bonnet.

(d) Any furnace, the casing top of which shall come within twelve inches (12") of a combustible floor, ceiling or joist, shall be protected by a metal shield, extending not less than eighteen (18") inches beyond the casing of said furnace. This shield shall be suspended at least two inches below woodwork, allowing free air space between shield and woodwork. No furnace casing or top, coming nearer than six (6") inches of ceiling or joists shall be allowed in any case.

(e) Openings for side casing collars shall be cut into the casing top or bonnet, so that the tops of all openings are on a level. Casing collars shall be fitted into place with a proper flange, or bead on the outside and drawn up on the inside, making a dust-tight joint. All collars shall be of same size as the warm air pipes to which they are to be connected.

(f) Brick, cement or hollow tile casings shall be constructed as follows: Walls shall be not less than eight (8") inches in thickness, and shall be constructed air tight. The least inside dimension of rectangular casings shall be the same as that of the portable casing of a corresponding size of furnace. Walls shall be carried to the same height as the portable walls, allowing not less than eight (8") inches between the top of the furnace and the bottom of the top cover. After placing the collars for the warm air pipes, continue the masonry up 2" above the top of the collars, lay single or tee irons across the furnace top, spaced 8", cover these with sheet metal not less than 26 U. S. Standard Gauge, cover the sheet metal with masonry or sand and run the side walls four (4") inches above the roof of the furnace. A galvanized iron casing bonnet may be used on a brick set furnace.

Provision shall be made in the walls for a manhole to give ingress to heater.

Warm Air Pipes in Basement

Section 5. (a) All warm air pipes shall be made of bright tin not lighter than IC, or galvanized iron. Side seams shall be locked seams. All joints shall be either double seamed or lapped not less than one and one-quarter (1¼") inches and such joints shall be match-beaded or beaded and soldered, or riveted. All pipes and fittings shall be properly secured to ceiling or joist. No solder or riveted joint is required where round pipe slips over the casing collar or enters boot or box. Any pipe twelve (12") inches or greater in diameter shall not be made of material lighter than IX tin or No. 26 U. S. Standard Gauge galvanized iron.

(b) All warm air pipes in the basement shall have an upward pitch of not less than one inch (1") per running foot.

(c) No warm air pipe shall run within one (1") inch of any woodwork unless such woodwork is covered with asbestos paper and the paper covered with tin or iron.

NATIONAL WARM AIR HEATING ASS'N, 174 E. Long St., Columbus, O.

(d) All warm air pipes in the basement shall be provided with dampers supported on both sides not more than two feet from the casing.

(e) Where warm air pipes pass through a masonry wall, a metal thimble shall be provided, having a diameter at least 1″ greater than the pipe, and pipe supported in such a manner that the air space is uniform on all sides.

Wall Stacks

Section 6. (a) Single Stacks. All single wall stacks or wall pipes, heads, boots, ells, tees, angles and other connections shall be made of tin or galvanized iron and shall be covered with not less than one thickness of 12 lbs. per one hundred (100) square feet of asbestos paper. All such pipes shall be braced in a proper manner so as not to obstruct the flow of air but to retain the full capacity throughout. All joints shall be locked and held in place by means of lugs, or straps. No joint either horizontal or vertical shall depend wholly upon solder to make it tight.

***Note 7. As an added safety factor, it is recommended that all studding and other woodwork facing said pipe be lined with metal and metal lath used in place of wood lath, and an air space of not less than five-sixteenths (5/16) of an inch be allowed on the two sides nearest the vertical studs.**

(b) Double Stacks. All double wall stacks or wall pipes, heads, boots, ells, tees, angles and other connections shall be made of tin, not lighter than IC or galvanized iron and shall be made double, from and including the boot or foot piece in basement to the top of each and every stack and register head on all floors. There shall be continuous air space of not less than five-sixteenths (5/16″) of an inch, which must be maintained between the outer and inner walls of all such pipes and fittings of all kinds, styles and descriptions; such pipes, heads, boots and other fittings to be of the styles, or equal to those accepted by the National Board of Fire Underwriters.

All stacks and fittings either single or double must be secured firmly in place by lugs or straps attached to the outer walls of stacks and fittings, and no nails shall be driven through these stacks or fittings at any point. No lugs or straps shall be formed by cutting holes in outer walls of stacks or fittings. No wall pipes or fittings shall be used which depend wholly on soldered joints. The various members shall be so made that all joints are locked or soldered and the several members shall be attached to each other with slip joints, which are, for the purpose intended, air tight.

(c) Where stacks, heads, boots or other fittings, whether double or single, go through the first floor, all openings around such heads, boots, stacks or fittings must be filled with asbestos cement or other incombustible material to make the openings gas and dust tight.

Registers

Section 7. (a) When baseboard or wall registers are used, they shall be properly and permanently attached to the stack head in such a manner that will prevent any leakage of air between the head and the register.

(b) Floor registers shall be provided with double register boxes of tin or galvanized iron with an air space of not less than five-sixteenths (5/16″) of an inch between inner and outer boxes or, where single boxes are used, they shall be thoroughly insulated from the wood or other combustible material with not less than two layers of 12 lbs. asbestos paper, or by the use of register borders.

(c) Registers for warm air and warm air pipes shall not be located in outside walls unless insulated with one-inch covering or its equivalent. The warm air registers in the various rooms shall be located in or near the inside walls in all cases.

(d) Any furnace system having not more than two warm air registers, at least one of the registers shall be without valve or louvers and a pipe thereto shall be without dampers.

Air Supply to Furnace

Section 8. (a) The air supply to furnace for warm air heating plants may be taken from outside or from within the building or may be taken partially from outside and partially from within. In no case, however, shall air be supplied to any furnace from any basement or furnace room not occupied as living quarters.

(b) The cold air intake or return where air is taken from within the building shall have a net area throughout its entire length of not less than the combined area of all warm air pipes leading from the furnace. This may be maintained in one or more ducts. No reverse incline or air trap will be allowed in any sections thereof.

(c) When the cold air supply is taken wholly from the outside of the building the supply duct at its most contracted area must equal or exceed eighty (80%) per cent of the combined area of all warm air pipes leading from the furnace.

(d) Cold air ducts shall be constructed of metal, tile or other incombustible material having smooth inner surface and shall maintain a constant net area throughout their entire length and shall be made dust tight. Horizontal rectangular return ducts shall have at least 10% greater area than vertical connecting pipes. Where a boot or shoe is connected to the casing at the base, the opening shall not extend higher than a line on the level of the top of the grate of the furnace. The width of the shoe shall be of proper measurement to make the area at least equal to that of the round or square pipe to which it is connected.

(e) Wherever the space between joists is used to convey cold air overhead, all bridging and bracing shall be removed and a sheet metal pan shall be constructed to extend not less than two (2″) inches below said joists. The connection from this pan to the boot or shoe shall be made of galvanized iron not less than U. S. Standard Gauge, and shall have a transition collar, the top area of which shall be at least 10% greater than the area of the connecting pipe.

Note 8. To reduce friction, and for the sake of cleanliness, it is recommended that the joists and all wooden surfaces between such joists shall be lined with metal.

(f) When it is necessary to set the furnace over a pit and connect up cold air under the basement floor, such pit or cold air trench shall not exceed eighteen inches (18″) in depth below the casing ring and the width of the trench or trenches shall be of proper measurement to make the area at least equal to the pipe to which it is connected. The connection between the cold air pipe or duct and the underground pit shall be made with converse transition joint as described in Article VI, Section 8 (b) and (d).

(g) The cold air face or faces shall be made of wood, or metal. When set in floors the top of same shall be flush with floor. Where cold air face is placed in a seat or side wall (whether furnished by owner, general contractor or furnace contractor) the open work of face must extend to within at least one (1″) inch of the floor line.

The free area of cold air faces shall be at least equal to the free area of the duct or ducts to which they are connected.

(h) The effective area of a vertical cold air face lies within fourteen inches of the floor line, hence, the capacity of any vertical cold air face shall be determined by multiplying the base line in inches by not to exceed fourteen inches in height and deducting for the grills or cross bars.

(i) When a fan is installed in the air supply duct of a gravity system the same net area of all ducts shall be maintained as calculated under Article 3, Section 1, 2 and 3 and Article 4, Section 8-(b).

Smoke Pipes

Section 9. (a) The smoke pipe shall be as short and direct as consistent with the location of the furnace. It shall be made of metal not lighter than No. 24 U. S. Standard gauge, and not less than the full size of the collar on the furnace throughout its entire length. It must have no opening for attaching any fire place, stove, range, water heater, gas or ventilating connection. It shall be lock seamed or riveted; all joints shall lap not less than one and one-half (1½″) inches and it shall be rigidly secured. Cast iron smoke pipe may be used.

(b) All smoke pipes shall be provided with check dampers, placed on the side of the pipe or at the end of a tee; when cast iron smoke pipe dampers are used they must be placed between the check damper and the furnace and supported on both sides of the pipe.

(c) Where the smoke pipe enters the flue, a thimble shall be cemented into the flue and the connections thereto made air tight. Should any smoke pipe come within eighteen (18″) inches of any combustible material, such combustible material must be covered with asbestos paper and a metal shield so fastened that a two inch air space exists between this shield and the combustible material. This shield shall be no less in size than twice the diameter of the smoke pipe and of sufficient length to cover the combustible material at all points.

(d) No smoke pipe shall project through any external wall or window. No furnace connection is to be made to a flue without a cast iron or steel cleanout having first been provided in the flue (not more than eight (8″) inches below the smoke pipe opening). The base of the flue shall be filled up to the bottom of the clean out: all of which must be made air tight.

Pipeless or One Pipe Furnaces

Section 10. (a) When but one duplex grating is used for both warm air and cold air in a so-called pipeless furnace, the area of the cold air intake shall be at least equal to the area of the warm air outlet of the grating. Art. 4, Sec. 4, relative to casing shall not govern when this type of furnace is installed, but the following specification shall be followed: The inner and outer casing of this type of furnace may be made of either black or galvanized iron not lighter than No. 26 U. S. Standard Gauge. A uniform air space shall be maintained at all points between the inner and outer casing. In no case shall the top of the heater be allowed closer than twelve (12″) inches to any ceiling or joists above the furnace.

(b) Where joists are cut to accommodate this furnace, headers shall be put in and braced.

(c) Article No. 3 for determining area of warm air pipe shall not govern in figuring a pipeless furnace.

(d) Where one warm air register face is used and separate face or faces for cold air supply are used, then Article No. 4, Sections 5, and 8 shall apply.

ARTICLE No. 5

Provisions to be made in Buildings under Construction for Reception of Gravity Warm Air Heating Systems

(a) The following provisions shall be made by the owner or building contractor, in any building wherein a gravity warm air heating system is to be installed.

(b) Where warm air register boxes, heads, pipes or stacks are to be installed, joists shall be set not less than sixteen inches (16″) on centers and shall be butted and not lapped. Studding shall be set directly over and under joists, leaving a space of not less than fourteen inches (14″) between studs and joists.

Wherever joists are cut, headers must be put in to support joists.

(c) All first story single or sub-floors shall be continuous. In all houses having studded exterior walls, these floors shall be extended to the outside sheathing and all spaces between studding shall be closed at the attic line.

Note 9. It is strongly recommended that the attic be tightly floored or ceilings insulated to reduce heat losses.

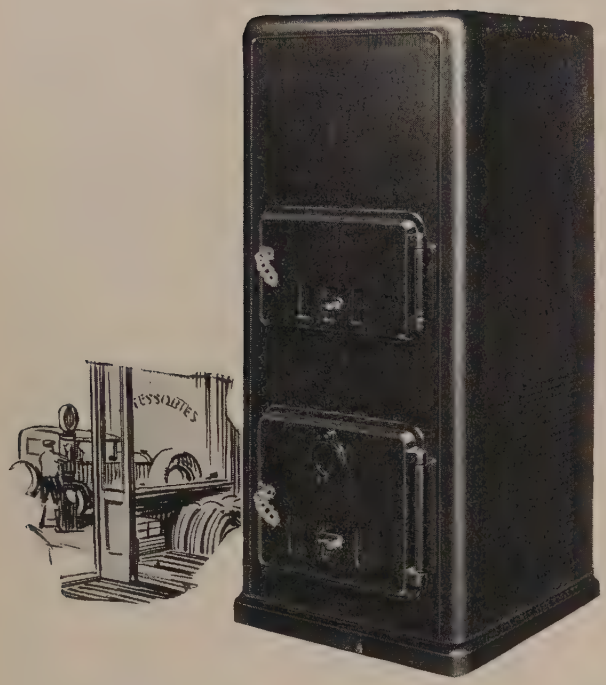
(d) All partition walls (or sections of these walls) in which heat stacks to second or third floor rooms are to be installed, shall be of sufficient size to accommodate stacks required to heat said rooms.

NATIONAL WARM AIR HEATING ASS'N, 174 E. Long St., Columbus, O.

VECTO HEATERS

Warm 2 to 8 Rooms

Other Products: Boilers and Radiators see pages 262-267
Hot Water Heaters see pages 282-283
Valves and Fittings see page 259



Burns Coal, Coke or Wood

No basement is required for the Vecto Heater. Its beauty and cleanliness make it an attractive piece of furniture for any room. Its walnut porcelain-enamel finish harmonizes with any surroundings.

The Vecto is a modern jacketed heater of unusual efficiency. Air is drawn in at the base, warmed by the scientifically designed heating surface and rises through the grill at the top to flow upward and outward. In three sizes, it warms a series of rooms or an entire small home, yet consumes no more fuel than the old-fashioned heater uses to heat one room. Its low cost, remarkable efficiency, and attractive appearance make it the outstanding heater of its type on the market.

The GAS VECTO

The Gas Vecto combines the cleanliness and conveniences of gas with the beauty and efficiency of the famous Vecto Heater. Its even flow of warmth is regulated by a smooth turn of a valve. As the body is one seamless casting absolute cleanliness is assured. A Bunsen type burner effects complete combustion of gas, and other improved features insure the highest efficiency. This heater has been developed to extend the warmth and comfort of Vecto heating to the many communities where natural or manufactured gas is an economical fuel. It is ideal in small homes and other detached buildings up to 5,000 cubic feet.

To install the Gas Vecto it is only necessary to connect it to a vent flue or chimney and a rigid gas connection.

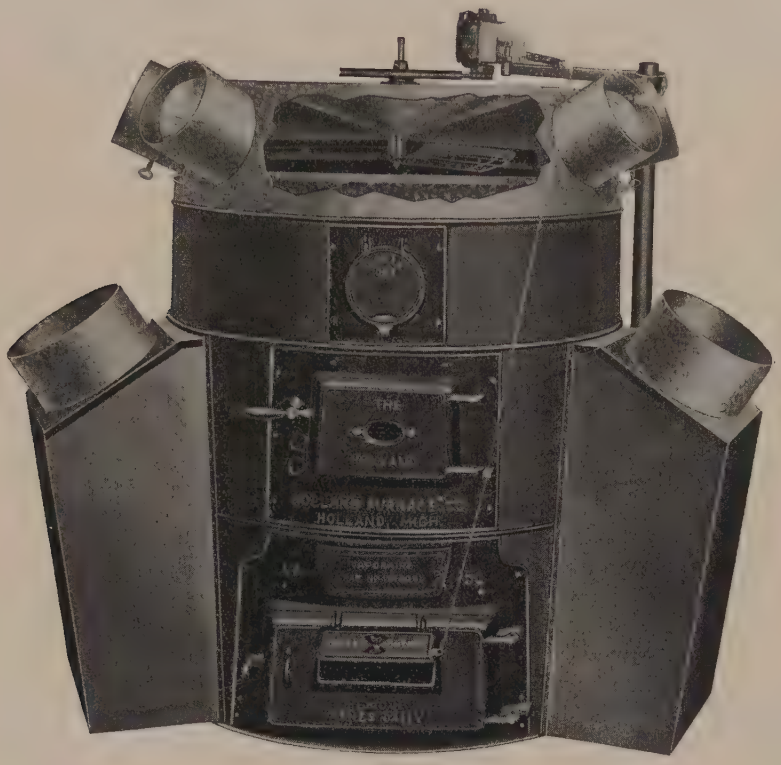
Products of AMERICAN RADIATOR COMPANY, 40 W. 40th St., New York City

HOLLAND FORCED VAPORAIRE HEATING

Our Product — *Made by* HOLLAND FURNACE COMPANY

Holland, Michigan

World's Largest Installer of Furnaces



Distributes Warmth Equally in Every Room

Moist air is distributed evenly—upstairs, downstairs, all around your home—by the modern Holland Vaporaire system of forced-air heating. A quiet, motor-driven, airplane-type propeller mounted in the top of a Vaporaire plant forces clean, healthful moist warm air the full length of every pipe.

The three essentials of perfect heating—correct temperature, proper humidity and constant circulation—assure comfort everywhere all the time. No room is ever hard to heat, regardless of location. It is like flooding your home with summertime. The air is balmy and moving—never dry or stagnant. Temperature need not vary.

Holland's patented humidifier constantly moistens the air by vaporizing 5 to 25 gallons of water daily. Forced circulation eliminates wasteful forced firing—making a moderate fire sufficient even in severe weather—saving tons of coal and paying for the system. Heating response is immediate.

The circulator fan drives warmth to every room whenever needed. This is the principle of large heating, cooling and ventilating systems used in fine theaters, hospitals, schools and similar buildings. It is the practical modern and permanent solution of the home-heating problem.

There is a life-time Holland of the right size and price for every home. Investigate Holland Forced Vaporaire heating. See how it provides greater comfort, convenience, economy and satisfaction than any other system. *Have a Holland man call.*

HOLLAND FURNACE COMPANY, Holland, Mich.

"Perfect," "Supersmokeless," "Superior" and "Essex"

WARM AIR HEATERS

Since 1837

Manufactured by RICHARDSON & BOYNTON CO.

260 Fifth Ave., New York City—Utica, N. Y.

BRANCH SALES OFFICES

CHICAGO BOSTON PHILADELPHIA BUFFALO NEWARK CINCINNATI PITTSBURGH DETROIT

Other Richardson & Boynton Products, "Richardson" Boilers, Pages 274 to 276, Tank Heaters, Page 290

Dimensions of "Perfect" Square Cased Heaters

Model No. 29

	2029	2229	2429	2629
Nominal Diameter of Firepot, ins	20	22	24	26
Grate Area, sq. ins	226.98	287.27	350.50	420.25
Size of Feed Door Opening with Pipe Holes, ins	12x15	12x15	12x15	12x15
Size of Smoke Pipe, ins	8	8	9	9
Width Across Front, ins	42¼	46¼	50¼	54¼
Depth from Front to Back, ins	41	45	49¼	53½
Height to Top of Deck, ins	51¼	51¼	51¼	51¼
Height with Bonnet, ins	64¼	64¼	65	65
Diameter of Radiator, ins	28	30½	33½	36½
Capacity in Square Inches of Heat Pipe	380	470	570	675

Minimum Height of Cellar Required, 5 ft. 8 ins.

4900 Series "Perfect" Positive Heaters for Anthracite

With Cast-Iron Radiator and Large Double Doors

No.	Diam. Fire Pot In.	Grate Area In.	Diam. Radiator In.	Diam. Cases, In.	Height of Panel Front, In.	Size Smoke Pipe, In.	Pipe Capacity Sq. In.	Shipping Weight Less Cases, Lbs.
4901	21	283.53	35	40	55¼	8	596	1365
4902	24	346.36	39	47	56⅛	9	740	1625
4904	26	415.48	43½	53	57½	9	863	1955
4906	29	572.56	48	58	59¾	10	1033	2240
4908	33	804.25	54	64	62	10	1340	2865

The SUPERIOR Warm Air Heater

CAPACITIES AND DIMENSIONS

Number	Diameter of Firepot In.	Diameter of Casings In. **	Height of Front In.	Feed Door Opening, In.	Size of Smoke Collar In.	Pipe Capacity Sq. In. *	Shipping Weights Less Casings Lbs.
A-18–340	18	34	46⅝	10 x12½	8	307	700
A-20–380	20	38	48	10 x13	8	369	775
A-22–420	22	42	50¼	11 x13½	8	452	925
A-24–460	24	46	52¾	11½x14½	9	546	1075
A-26–500	26	50	53¾	12½x14½	9	646	1300
A-28–540	28	54	54¼	12½x14½	9	750	1550
A-30–620	30	62	62⅜	13 x15½	9	895	2000

The SUPER-SMOKELESS Warm Air Heater

CAPACITIES AND DIMENSIONS

Number	Diameter of Firepot In.	Diameter of Casings In.	Height of Front In.	Feed Door Opening, In.	Size of Smoke Collar In.	Pipe Capacity Sq. In. *	Shipping Weights Less Casings Lbs.
SS-18	18	38	50	10 x12½	8	300	750
SS-20	20	42	51⅜	10 x13	8	425	900
SS-22	22	46	54¼	11 x13½	8	525	1075
SS-24	24	52	57¾	11½x14½	9	625	1250
SS-26	26	56	58½	12½x14½	9	725	1500
SS-28	28	62	59	12½x14½	9	875	1775
SS-30	30	62	62⅜	13 x15½	9	1025	2150

RICHARDSON & BOYNTON CO., New York City—Utica, N. Y.

Series "A" "Perfect" Warm Air Heater

With One-Piece Cast-Iron Radiator

No.	Diam. Fire Pot In.	Grate Area, In.	Diam. Radiator In.	Diam. Cases, In.	Hght. of Panel Front, In.	Size of Smoke Pipe, In.	Pipe Capacity Sq. In.	Shipping Weight Less Cases, Lbs.
3362	18	176.72	28	36	49⅞	8	338	650
3402	20	226.98	28	40	49⅞	8	404	775
3442	22	287.27	30½	44	49⅞	8	476	940
3482	24	350.50	33½	48	49⅞	9	570	1080
3522	26	447.68	37½	52	49⅞	9	687	1225
2229E	29	572.56	40	53½	58	9	851	1600

The ESSEX Warm Air Heater

CAPACITIES AND DIMENSIONS

Number	Diameter of Firepot In.	Diameter of Casings In.	Height of Front In.
32–18	18	32	41¾
36–20	20	36	43½
40–22	22	40	44½
44–24	24	44	45¼

Feed Door Opening In.	Smoke Collar In.	Pipe Capacity Sq. In.	Shipping Weights Less Casings Lbs.
10 x12½	8	250	500
10 x13	8	325	600
11 x13½	8	400	700
11½x14½	8	500	800

The "Perfect" Copper-Bearing Wrought Steel Warm Air Heater

Size	Diameter Combustion Chamber, Inches	Diameter Cases, Inches	Area of Grate, Sq. In.	Height of Panel Front Inches	Heat Pipe Capacity Sq. Ins.	Shipping Weight Less Case, Pounds
1022	22	50	270.72	56	450	1050
1024	24	52	329.76	56	575	1110
1026	26	54	397.44	56	700	1175
1030	30	58	509.76	56	850	1310
1034	34	62	704.16	56	1100	1410
1340 Jumbo	34	70	704.16	64	1350	1850

"Perfect" Pipeless Heaters

Dimensions of Series B "Perfect" Pipeless Heaters

	3321	3361	3401	3441	3481	3521
Diameter of Firepot, in	16	18	20	22	24	26
Grate Area, in	132.73	176.72	226.98	287.27	350.50	447.68
Size of Feed Door Opening with Pipe Holes, in	12x15	12x15	12x15	12x15	12x15	12x15
Size of Smoke Pipe, in	7	8	8	8	9	9
Diameter Inner Casing, in	32	36	40	44	48	52
Diameter Outer Casing, in	44	48	52	56	60	64
Size, Register Opening, in	24x24	25½x25½	27½x27½	29½x29½	31½x31½	35¼x35¼
Size, Warm Air Pipe, in	16	17½	19½	22	23	28
Capacity, cu. ft	6–8000	8–10000	9–13000	13–18000	18–28000	28–40000
Height from Floor to Top of Bonnet, in.	66¼	66¼	66¼	66¼	66¼	66¼
To Top of Register, in	96	96	96	96	96	96

Minimum height of cellar required, 6½ feet

RICHARDSON & BOYNTON CO., New York City—Utica, N. Y.

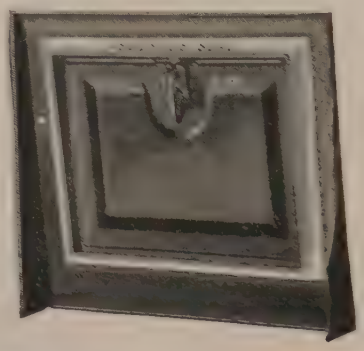
Warm Air Registers and Enclosure Grilles

Manufactured by THE AUER REGISTER CO.

3608 Payne Ave., CLEVELAND, O.

Products:
AUER PATENTED Baseboard and Wall Registers.
Steel and Semi-Cast Floor Registers.
Steel and Cast Cold Air Faces.
GRILLES for enclosed radiators and general heating and ventilating purposes.
All Metal Utility Door and Frame.

Advantages:
Permanently perfect Operating Devices—Patented Type. The Operating Adjustment is the most essential part of a register since it controls the functioning thereof. Yes, we have Ample Air Capacity, handsome appearance, pinched back free work and many other advantages—but these features are only secondary and are of no avail unless operating valve functions perfectly. This is where the AUER excels.

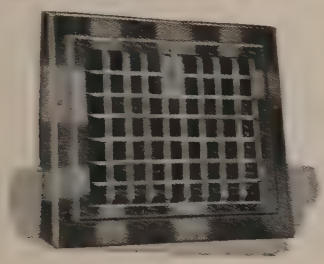


AUER Registers are a mark of distinction—yet cost no more than the ordinary types. You will find "AUERS" years ahead.

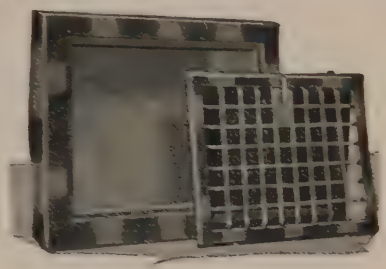
Pro-Tex-Wall

Pro-Tex-Wall Registers

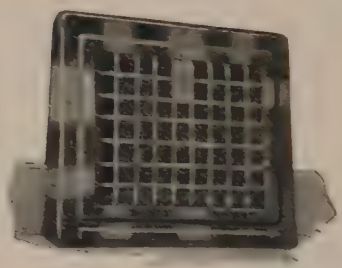
Asbestos sealed—eliminates streaked walls. For that better job.



Aristocrat Model with Square Corners Has Patented Pro-Tex-Wall Feature when so specified.



Colonial Model—Grille Removed



Economy Model with Round Corners

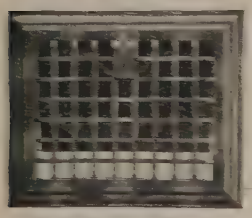
Auer Baseboard Registers made in sizes 8 x 10 to 14 x 14 inclusive

Height from floor to box opening of all our baseboard registers is 2⅛ inches.

Auer Registers are standard to three models of efficient, decorative, protective and concealing designs, which fit the same boxes and conform in sizes, depth of flanges, and height from floor to box opening, to the standard code recently adopted.

Equipped with Auer Permanently Perfect Operating Adjustments. The grilles are convexed on all models, thus enhancing the harmonious lines of the register and affording greater efficiency.

Streaky unsightly walls are eliminated when Auer Registers are used and correctly installed.

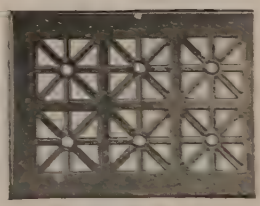


Wall Register Fig. B.

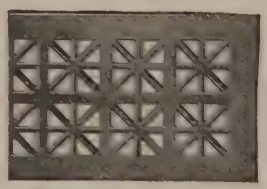
Design No. 5 A

Design No 4 A

All Metal Door and Frame (steel) For clothes chutes and other purposes.



Design No. 7 A



Design No. 12 A

Grilles made of Steel, Brass, Bronze or Copper Any required size; Many designs; standard finishes.

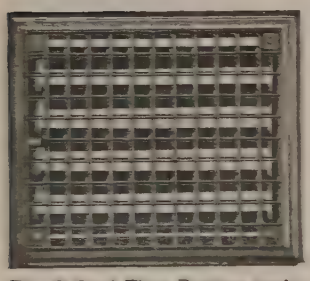


Fig. O Steel Floor Register made in all sizes and finishes.

Fig. M Semi-Cast Floor Register, made in sizes 6x8 to 20x24.

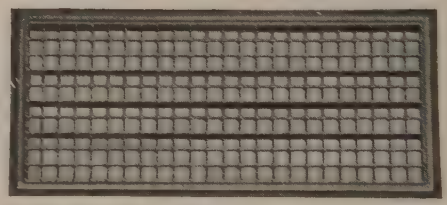


Fig. T Steel Floor Face—Made in any required size.

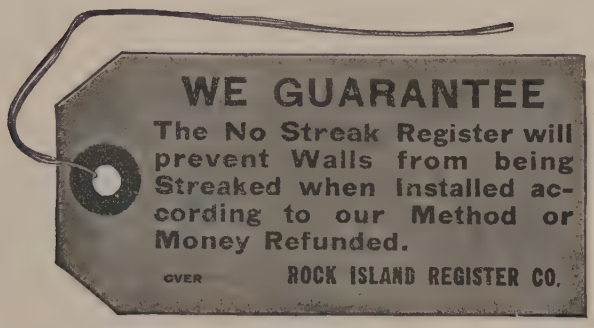
THE AUER REGISTER CO., 3608 Payne Ave., Cleveland, O.

No Streak Guaranteed Wall Registers

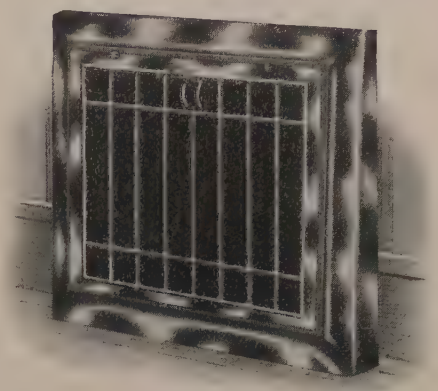
Made by ROCK ISLAND REGISTER CO.

ROCK ISLAND, ILL.

Members of the National Warm Air Heating & Ventilating Association


WE GUARANTEE
The No Streak Register will prevent Walls from being Streaked when installed according to our Method or Money Refunded.
OVER
ROCK ISLAND REGISTER CO.

This Guarantee Tag is attached to every NO STREAK Register.



"No Streak" Register:

This is the only warm air register guaranteed to prevent streaking of the walls (see Guarantee Tag)—a feature especially valuable because it saves the house owner 80% of the annual decorating expense.

Efficient: Construction:

They comply with every requirement of the Standard Code on Registers and Furnace installation by having full 100% area through boot or pipe connection and through the Grille.

The register boxes are made of double galvanized iron with tin linings, making a dead air space for insulation, which adds to the durability of the register as well as increasing fire protection. In addition, the inside of all Boxes are finished in Duco Green which harmonizes with all interiors and makes a very attractive appearance.

Finishes:

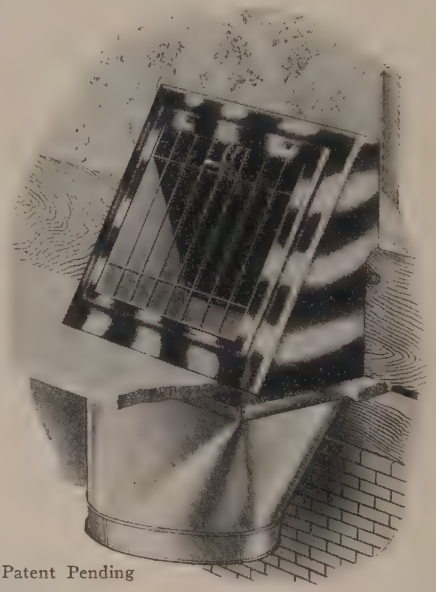
Rock Island registers are finished in the most modern and durable manner known to the electro-plater's art to match all prevailing hardware finishes.

Standard finishes are electro-plated Oxidized Copper, Brush Brass and Nickel. All special sanded finishes will be made to match hardware upon request.

The enamel finishes are high-gloss, baked-in Black, and a durable, non-changing White.

A very attractive and moderate priced finish is available in our Lacquered Bronze paint finish to correspond in color to the standard electro-plated finishes.

"Out-o-Wall" Register:



Patent Pending

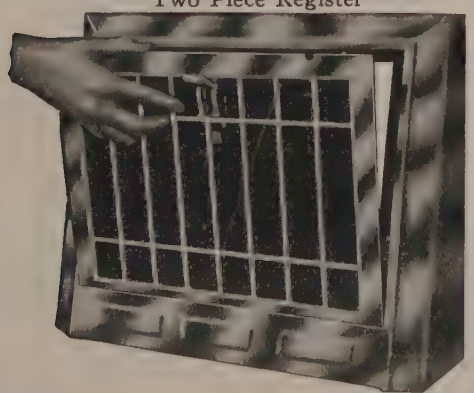
The most satisfactory and efficient wall register for installation in houses already built or those where the construction will not permit of the usual type of wall register.

The register and double wall box are a unit that is installed by simply cutting the baseboard and a hole in the floor against the wall. This installation saves approximately 90% of the usual labor necessary to cut and install ordinary wall registers, and makes an attractive and efficient job.

Fittings interchangeable with "NO STREAK" Registers.

The Island City Register

Two Piece Register



An exceptional quality two piece or removable Grille style of register that is Trouble-proof and Efficient.

Special Features are: Full capacity standard sizes, easy installation by two wood screws or by flanging over the box projection under the Grille, two-inch trimming margin between box and edge of frame, and Malleable trouble-proof operating lever.

You will be proud to show NO STREAK Registers to your friends and prospective Buyers. Catalog, Heating Plans and Estimates will be furnished Free on your request.

ROCK ISLAND REGISTER COMPANY, Rock Island, Ill.

TRICO

ART METAL RADIATOR FURNITURE

Made by **TRICO, INCORPORATED, *Subsidiary*** **ART METAL RADIATOR COVER CO.**

General Offices and Plant, 1782 North Kolmar Avenue, Chicago

1. Products

Exclusive manufacturer and distributor of TRICO ART METAL RADIATOR FURNITURE, with humidifying water pans. Made in two styles and thirty-five models.

Grille Facings, cast and sheet steel, for recessed radiation.

A complete line of home utilities including Hampers, Cabinets, Stands, etc. All heavy steel equipment.

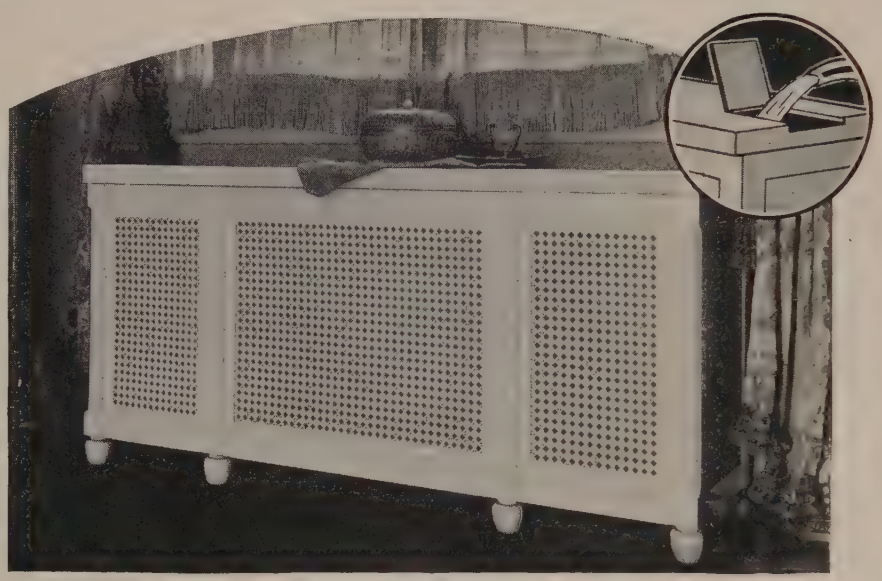
2. Purpose

Trico Radiator Furniture has been scientifically designed to stop smudge on walls and transform unsightly radiators into decorative pieces of furniture, useful as shelves, window benches and consoles. Patented humidifying water pan humidifies and clarifies the air, making living conditions more healthful. Saves fuel.

3. Service

Branch office representatives in every large city will call, show models and samples, and give estimates without any obligation whatsoever.

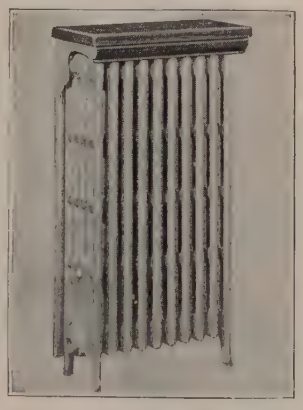
An Engineering Department is maintained to co-operate with and render assistance to contractors and builders in the selection of the proper type of radiator furniture for individual jobs.



Model "N" Trico Enclosure

4. Construction

Trico Radiator Furniture is made of the finest furniture steel obtainable. It is finished by hand to harmonize with the most carefully planned interiors. All parts are welded (not soldered) together. Sketches and suggestions for installations will be gladly furnished on request.



Model "X" Open Cover

5. Specifications

Tops or Covers—No. 14 gauge No. 1 grade furniture steel, flanged on all sides 1¼ in.; corners machine formed, acetylene-welded, ground, buffed and finished.

Heat Deflectors or Backs—No. 24 gauge steel, finished with baked enamel to harmonize with color of top. Back extends full height and width of radiator.

Enclosure Frames—No. 16 gauge No. 1 grade furniture steel. Legs reinforced. Adjustable feet to take up floor irregularities.

Water Pans—No. 24 gauge Cop-R-Loy, depth 1¼ in., sides and ends reinforced. Corners machine drawn (not soldered).

Brackets — (Open Type) No. 12 gauge pressed steel, finished to harmonize with back.

Apron — (Open Type) No. 20 gauge No. 1 furniture steel. Die formed. Designed to connect end brackets and hide underneath fittings.

6. Types

Enclosure and Open. Enclosures made with grille panels of many artistic designs which include rod, punched cane, metal woven cane, imported grilles, basket weave, etc., patterns.

7. General

Door is made in top for filling water pan (see illustration). Door is made in grille panel or top for access to radiator control valve.

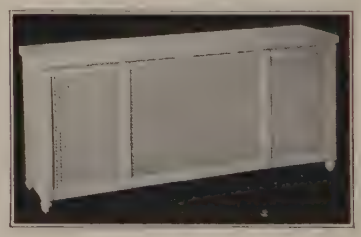
8. Finish

Tops, frames and aprons furnished with many coats of baked-on enamel applied by hand, not by machine or photographic processes, in any plain color, wood grain or marble effect desired to harmonize with any interior.

9. Specification Data

Write for Trico Folder containing specifications and complete data on all models and styles.

TRICO HAMPERS, CABINETS, TABLES AND STANDS



Model "A" Trico Enclosure

A complete line for use in the bathroom, bedroom and kitchen. Built entirely of finest sheet steel. All parts electrically welded. Practically indestructible. Finished with many coats of lustrous baked enamel in wide range of colors. Write for catalog.

TRICO, INC., 1782 North Kolmar Avenue, Chicago

Registers, Grilles and Radiator Cabinets

Made by TUTTLE & BAILEY MFG. CO.

Established 1846

441 Lexington Avenue, NEW YORK

CHICAGO
1123-29 W. 37th St.

BOSTON
36 Portland St.

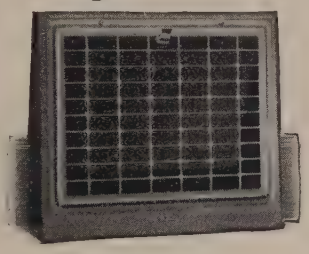
KANSAS CITY
704 E. 18th St.

ACCEPTED by THE HOME MAKING CENTER of the N. Y. State FEDERATION OF WOMEN'S CLUBS

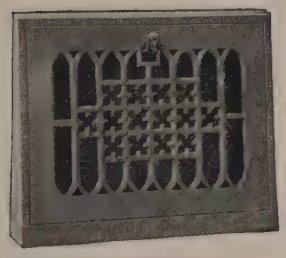
WARM AIR REGISTERS
for Modern Homes

Newly built homes require equipment that is modern in appearance and construction. Equipment capable of giving satisfaction according to present-day ideas of what satisfaction means. So many builders and furnace men prefer T & B Registers for new homes because T & B Registers meet the requirements of the times. Witness the beautiful finishes applied to T & B Registers. They meet exactly the color ideas of today—particularly the famous T & B TANBO, ANTIQUE and TANVORY shades. Consider the sturdy and scientific construction of these Registers—their ability to stand up and give entire heating satisfaction under every-day use. How they reduce installers' time and labor merely because of a little extra touch here and there!

STYLE 902 BASEBOARD Register



An example of our popular standard items. A two-piece register, made of heavy gauge open-hearth steel. Flange formed in one piece and face fits snugly, preventing leaks and streaky walls. Center Fan Movement (valve) is easily operated and absolutely positive. Face sizes and throat depths to fit all standard stackheads made. Style 402 is same except flange and face are one piece. Design of both registers assures EXCESS AIR CAPACITY.



Tudor Design

FERROCRAFT REGISTERS

An entirely new theme in register design for those seeking higher beauty in home furnishings. The fret-work is a FERROCRAFT *Cast* Grille, offered in Tudor, Colonial and Classic designs. These were selected from the widely known FERROCRAFT Grille designs and may be fitted to both sidewall and baseboard Registers.

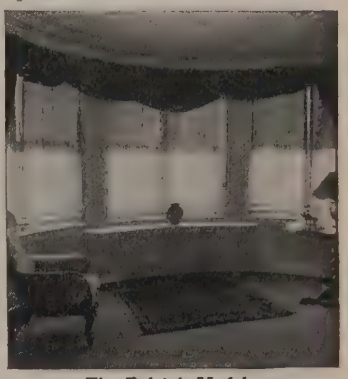
OTHER T & B REGISTERS
for every part of the Modern Home

The T & B Line consists of a great number of registers—a variety befitting our 83 years of activity in the Warm Air Heating Field. The registers shown above are mere general introductions. Those interested in registers, for any part of the heating system, are asked to write us for literature and further details.

'TUTTLE & BAILEY' SUPER-REGS

T & B RADIATOR CABINETS
all-metal, Beautifully finished

Although primarily designed to hide discordant radiators, rich finishing has placed Tuttle & Bailey Radiator Cabinets in a class with the finest home furnishings. Where wood reproductions are desired, all graining is done by hand and the completed cabinet cannot be distinguished from the most expensive wood furniture. Finishes are first baked on, then gone over by hand with expert skill and care. Twelve standard finishes are offered, as well as any other color to match woodwork; also in priming coat. T&B Cabinets are offered in a large number of pleasing models. All-metal construction throughout, combining maximum strength and rigidity. Front panels only have grilles, available in a generous variety. Solid steel back protects walls and curtains. A humidifier is part of each cabinet. Top can be raised to vary heat flow. Made to order only to fit any size or shape radiator. To estimate, we must know size of radiator, choice of style, grille design and finish. Send for booklet showing variety of models and other details.

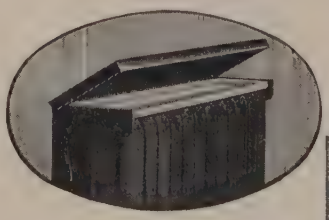


The Raleigh Model

The Villa Console

RADIATOR SHIELDS
All-Metal, any finish

Same quality construction, workmanship and finish, which distinguish T & B Radiator Cabinets, are part of T & B Shields. Offered in all sizes and either finished to match woodwork, or in priming coat. Lid can be raised, as illustrated, and a humidifier comes with each T & B Shield. Effect considerable economy by eliminating frequent re-decorating costs, as heat is deflected *outward* — away from walls and curtains. Also prevents soiled ceilings above radiators. Full particulars sent on request.



Radiator Shield installed. Oval cut above shows hinged top partly raised and humidifier.

TUTTLE & BAILEY MFG. CO., 441 Lexington Avenue, New York

McQUAY Concealed RADIATOR

Only an inconspicuous grille, and a small air inlet, near the floor, can be seen. Yet a flood of warmed air pours through the grille to circulate throughout the room. Eliminates bulky, unsightly radiators that clutter up floors and mar the beauty of rooms.

The front of the steel cabinet, containing the radiator, is plastered over keeping the wall surface intact.

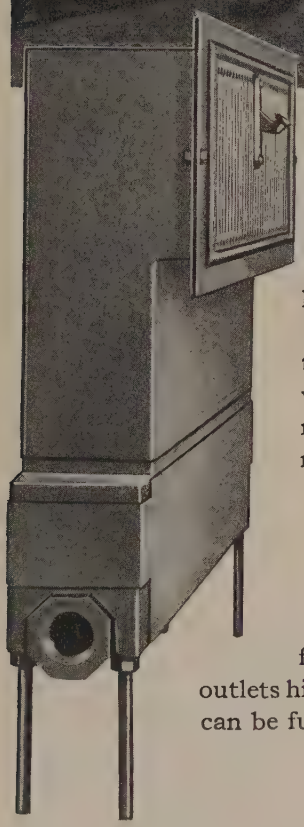
Provides Complete Circulation

This continuous flow of air, entering the radiator from the floor, and passing into the room from the grille above, provides the circulation of heated air so necessary to comfortable, efficient heating.

Indestructible Heating Unit— Needs No Repairs

The heating unit (inside the steel cabinet) consists of a series of horizontal tubes, held in place by copper fins, and nested in bronze metal headers that act as manifolds.

The tubes are tin-coated inside giving them a glass-smooth surface that prevents corrosion and clogging. The entire radiator is practically indestructible, and needs no repairs.



Made Complete, as Pictured, at Left

In 20, 23 and 26-inch heights (from floor to top of warm air outlet). For air outlets higher than 26 inches, intermediate stacks can be furnished.

McQuay Under-Window Type Concealed Radiator

An ideal radiator for installation under windows. Note that no floor space is used by the radiator—the entire radiator fitting into the wall. The front panel which can be removed, is flush with the wall, and is painted to harmonize with it.

The Complete McQuay Line Consists of

McQUAY CONCEALED RADIATORS, described above

McQUAY CABINET RADIATORS, see next page

McQUAY UNIT HEATERS, for more efficiently heating stores, churches, offices, factories, etc.

Branches in Principal Cities

McQUAY RADIATOR CORPORATION

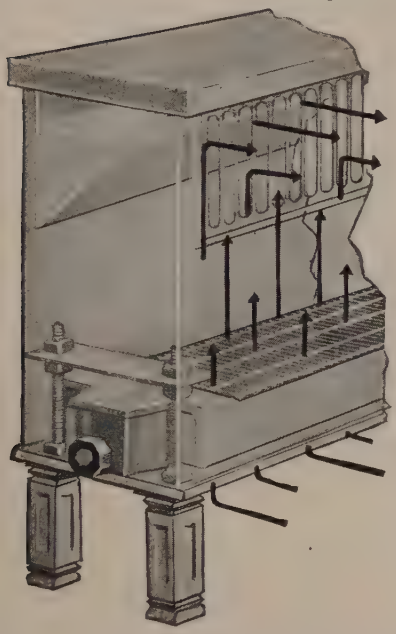
General Sales Offices Pure Oil Building, Chicago

McQUAY Cabinet RADIATOR

A Complete Radiator Not Just a Cover

It is no longer necessary to mar the beauty of rooms with bulky unsightly radiators. For here is a *complete radiator*, enclosed in an attractive cabinet of heavy furniture steel, which can be painted or enameled any color desired in harmony with the decorative treatment of the room it heats.

Heats Quicker—Because It Gives Complete Circulation



The phantom drawing shows the complete McQuay. Cold air is drawn from the floor, into the bottom of the radiator, passing up through the copper heating unit, and then out into the room in a horizontal direction.

This gives the heated air sufficient initial velocity to circulate it to every corner of the room—heating far quicker.

A humidifying pan, inside the cabinet, provides the moisture which heated air must have to be healthy. It helps prevent coughs and colds, and prevents the heat from drying out furniture.

Won't "Smudge" Walls and Drapes

Instead of sending the heat up against the walls, drapes and curtains to soil and "smudge" them—as ordinary radiators do, the McQuay sends it out into the room where it is needed. That prevents any soiling and smudging of the walls.

More Efficient—Low in Cost

Moist air heats more effectively than dry heat. This fact, plus the complete circulation provided by McQuay Cabinet Radiators means that equal comfort for the occupants of a room may be had with considerably lower radiator temperatures. Naturally this means a fuel saving. Yet the cost of the complete McQuay is seldom more, but usually less than for old style radiators plus their necessary separate covers or shields.

Series 500-S—5 inches in depth

Cabinet Lengths: 15, 17½, 20, 22½, 25, 27½, 30, 32½, 35, 37½, 40, 42½, 45, 47½, 50 inches.

In any of the following heights: 20, 23, 26, 32, 38 inches.

Equivalent to 9½ to 52½ sq. ft. of cast iron radiation.

Series 900-S—9 inches in depth

Cabinet Lengths: 15, 17½, 20, 22½, 25, 27½, 30, 32½, 35, 37½, 40, 42½, 45, 47½, 50, 52½, 55, 57½, 60, 62½ in.

In any of the following heights: 20, 23, 26, 32, 38 inches.

Equivalent to 17 to 99 sq. ft. of cast iron radiation.

Series 700-S—7 inches in depth

Cabinet Lengths: 15, 17½, 20, 22½, 25, 27½, 30, 32½, 35, 37½, 40, 42½, 45, 47½, 50, 52½, 55, 57½, 60 in.

In any of the following heights: 20, 23, 26, 32, 38 inches.

Equivalent to 16½ to 85 sq. ft. of cast iron radiation.

Series 1100-S—11 inches in depth

Cabinet Lengths: 15, 17½, 20, 22½, 25, 27½, 30, 32½, 35, 37½, 40, 42½, 45, 47½, 50, 52½, 55, 57½, 60, 62½ in.

In any of the following heights: 20, 23, 26, 32, 38 inches.

Equivalent to 18 to 122 sq. ft. of cast iron radiation.

THE BATH-ROOM type is designed for installation back of lavatories or in other "out-of-the-way" places. An ideal unit where only small space is available.

Branches in Principal Cities

McQUAY RADIATOR CORPORATION

General Sales Offices Pure Oil Building, Chicago

INTERNATIONAL BURNERS CORPORATION

Formerly The Caloroil Burner Corporation

225 West 34th Street, New York, N. Y.
260 Tremont Street, Boston, Mass.

Oil Burners for Every Purse and Purpose

Caloroil THE LIFETIME BURNER

The Crescent *Oil Burner*

Victory *Oil Burner*

WHICH OIL BURNER

NO ONE single factor in building so modernizes a home and adds resale value as oil heat. Clean, even, care free, laborless heat appeals to both men and women.

But Which Oil Burner?—That's The Question.

The Three Unit International Line of Burners answers this question for you. In these three units—The Caloroil—The Crescent—and The Victory—you have a line of well known, dependable burners.

Regardless of what price and size homes you build—what type boiler you install—in the International Line there is a burner to fit your specific needs.

Moreover, these burners are installed by men who know the heating business—dealers whom you know locally or work with.

Back of these dealers is this organization's eleven years of oil burner experience and its reputation for helping builders to "fit the oil burner to the house rather than the house to the oil burner."

INTERNATIONAL BURNERS CORPORATION

Formerly The Caloroil Burner Corporation

HEAT IS LIFE

INTERNATIONAL BURNERS CORPORATION

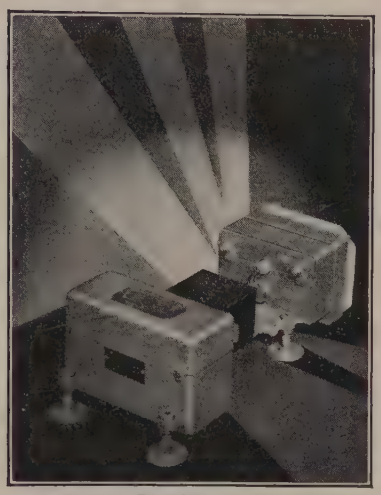
Formerly The Caloroil Burner Corporation

225 West 34th Street, New York, N. Y.
260 Tremont Street, Boston, Mass.

Oil Burners for Every Purse and Purpose

Caloroil THE LIFETIME BURNER — **The Crescent** *Oil Burner* — **Victory** *Oil Burner*

Now You Can Fit the Oil Burner to the Home You Build



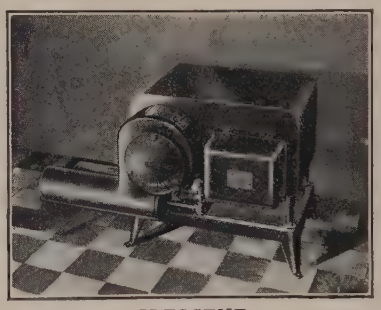
CALOROIL
the Vacuum-Pressure type burner

EACH manufacturer of an oil burner in the past has urged the purchase of his particular burner for the apartment, the 12-room house, the 8-room home or the 5-room bungalow. Such a plan was unsound, for no single oil burner could fit every home.

The International Burners Corporation, pioneer manufacturers of oil heating equipment, has changed that condition. They offer you a line of oil burners, proved leaders in the type and capacity that fit your particular needs and pocketbook.

THE CALOROIL BURNER is unique in mechanical design and utilizes the vacuum-pressure principle. The fuel oil is automatically fed to the atomizing unit. The compressed air is passed over the oil nozzle which creates a vacuum or suction that lifts the oil and sprays it into the combustion chamber. The compressed air is used at a maximum of five pounds pressure for domestic installations and higher air or steam pressure for commercial and industrial work.
There is no pressure on the oil—it is not forced into the combustion chamber.

This was the first burner passed by the National Board of Fire Underwriters to burn the 28° Baume fuel oil for domestic use and can be equipped with either electric spark ignition, a combination of electric spark or by a constant gas pilot. It may be installed by simply removing the grates of the boiler or furnace and lining the ash pit with refractory material.

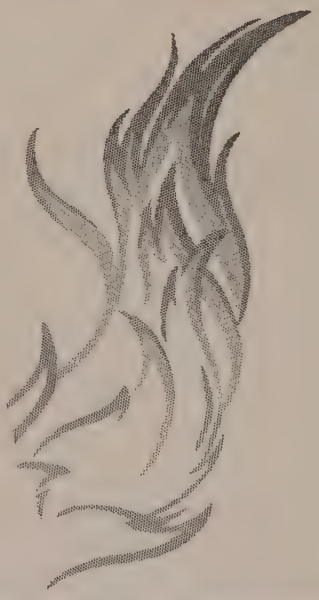


CRESCENT
the gun type burner

THE Crescent is of the popular gun or blower type burner and is of very simple design.
It also burns the 28° fuel oil. The oil is drawn to the burner by means of a Viking pump and after passing through regulating valves is sprayed into the combustion chamber. The air is furnished by means of a Sirocco type fan.
This burner is also furnished with either electric spark ignition or a constant gas pilot.

VICTORY
the rotary type burner

THE VICTORY BURNER is a vertical rotary type, commonly called the "Spinning Plate" type. The fuel oil is broken up by means of centrifugal force. It is operated with only a 1/12 h.p. motor and is ignited by a constant gas pilot.
This burner is particularly adaptable for small round boiler installations. It is strongly built and absolutely dependable in operation.



HEAT IS LIFE

INTERNATIONAL BURNERS CORPORATION

Formerly The Caloroil Burner Corporation

About the New CHALLENGER *Model*

Kleen-Heet with Oil

And Some Plain Facts About All Good Oil Heat

For the medium-size, and smaller home

First-cost, as an obstacle to oil heat enjoyment, has now been largely removed.

Natural progress has brought this modern convenience more easily within reach of the modest income—and more perfectly suited to the needs of medium-size and smaller homes.

This is all natural, and reasonable. Automobiles have steadily improved. So have vacuum sweepers, radio, every other modern convenience you enjoy. Good oil burners have had the same steady progress. Oil heat from the very start has offered comfort coal heat can't give. And such burners as this CHALLENGER Model KLEEN-HEET are distinctly better than the good burners of a few years ago.

It is very quiet and simple

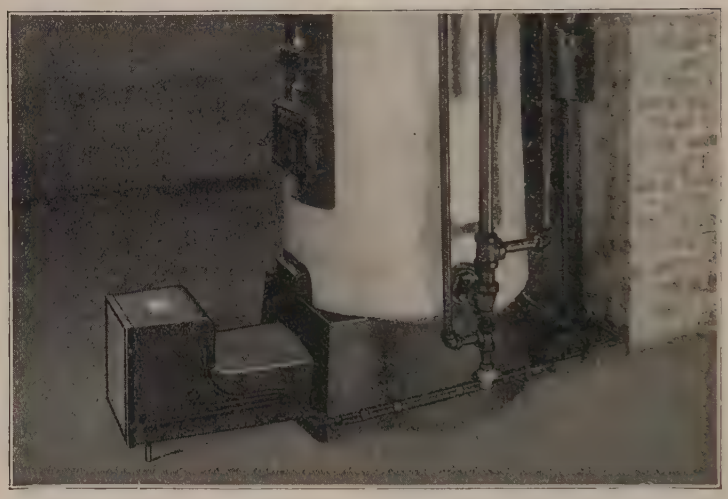
You *cannot hear* the CHALLENGER in operation. It is remarkably simple; hasn't a single moving part—needs no oiling and very little attention of any kind. It is fully automatic—operates only when the thermostat control calls for more heat to keep room temperatures exactly where you want them.

It was specially designed for homes of medium, and smaller size—with vapor, steam, hot water, or hot air heating plants (silent operation makes it particularly desirable in a hot air furnace). It burns a clean, inexpensive oil. And, like all KLEEN-HEET models, is approved by every important safety board.

Price surprisingly low

Never before has automatic oil heating equipment of this character been available at so low a price. A down payment of from $25 to $50 installs the CHALLENGER. Then you have a year to pay the balance. Installation can be made at *any* time without interruption in heating your home. If you do not know a KLEEN-HEET dealer, *a post-card will bring you, at once, address of the nearest one*—and full details.

(*Dealers in all principal cities*)



Plain Photograph of a Typical Installation

TODAY, COMMON SENSE GOVERNS

Oil Heat Buying

No good oil burner will cut your heating bills in half. It will not increase heating costs—and may even reduce them somewhat. More comfort per dollar spent is the real reason for having good OIL HEAT.

And people no longer believe that oil heat will work miracles. Now and then any good oil burner will need a little attention—just as a good car does, or your radio set, or anything else men make. Very little attention, to be sure, compared with coal heat.

There are other good burners beside KLEEN-HEET—and no home-owner will go far wrong with any of these several leaders. Oil heat is simply the modern way to keep modern homes more comfortable. Now KLEEN-HEET reduces first-cost.

THE WINSLOW BOILER & ENGINEERING CO., 844 Rush St., Chicago, Ill.

These AMERICAN ACCESSORIES
Make a Better Heating Plant

Other Products: Boilers and Radiators see pages 262-267
Hot Water Heaters see pages 282-283
Heaters see page 246

The success of any heating plant is to a great measure dependent upon its smallest part. The failure of just one valve may seriously handicap the operation and efficiency of the entire job.

Realizing the need and importance of good accessories, the American Radiator Company has developed a complete line of quality appliances for steam, water and one pipe vacuum systems. And in each accessory is incorporated the lifelong experience of heating experts who have had the facilities and advantages of the largest and most complete laboratory and factory in the world devoted exclusively to heating problems.

A complete American Radiator heating plant—boiler, radiators and accessories—means only one undivided responsibility—a complete unit made and backed by a responsible manufacturer.

A Complete Line of Heating Equipment and Accessories

Redflash and Arcoflash Boilers—Corto Radiators—Arco Packless Valves—In-Airid and Airid Air Valves—Hotcoil and Kolflash Water Heaters—Excelso Heaters—Ideal Vac-Vents—Ideal Quick Vents—Arco Damper Regulators and Arco Tank Regulators.

IN-AIRID
No. 1 and 2

ARCO
PACKLESS
No. 999

AIRID
AIR VALVE

For Steam

Arcoflash or Redflash Boiler
Corto Radiators
Arco Packless Valves No. 999
In-Airid or Airid Air Valves
Excelso Indirect Heater
Ideal Quick Vents No. 815 or 822
Hotcoil or Kolflash Heater

For Water

Arcoflash or Redflash Boiler
Corto Radiators
Arco Packless Valves No. 901
Excelso Direct Heater
Hotcoil or Kolflash Heater

For One Pipe Vacuum

Redflash or Arcoflash Boiler
Corto Radiators
In-Airid No. 2 or Vac-Airid No. 510 Vacuum Valves
No. 999 Arco Packless Valves
Vac-Vents No. 822
Excelso Heater
Hotcoil or Kolflash Heater

AMERICAN RADIATOR COMPANY

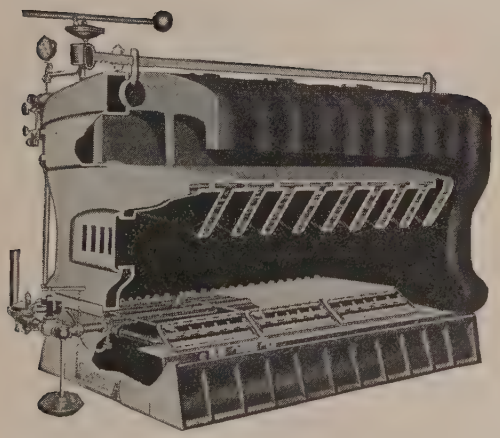
BARBER PATENTED JET GAS BURNERS

Made by THE CLEVELAND GAS BURNER & APPLIANCE CO.

Burner Specialists

3702-04 Superior Ave., CLEVELAND, OHIO

The Barber Automatic Gas Burner Converts Your Coal-Burning Boiler or Furnace Into a Safe, Efficient, Economical and Carefree Automatic Gas Heater—that Forever Ends Your House Heating Worries



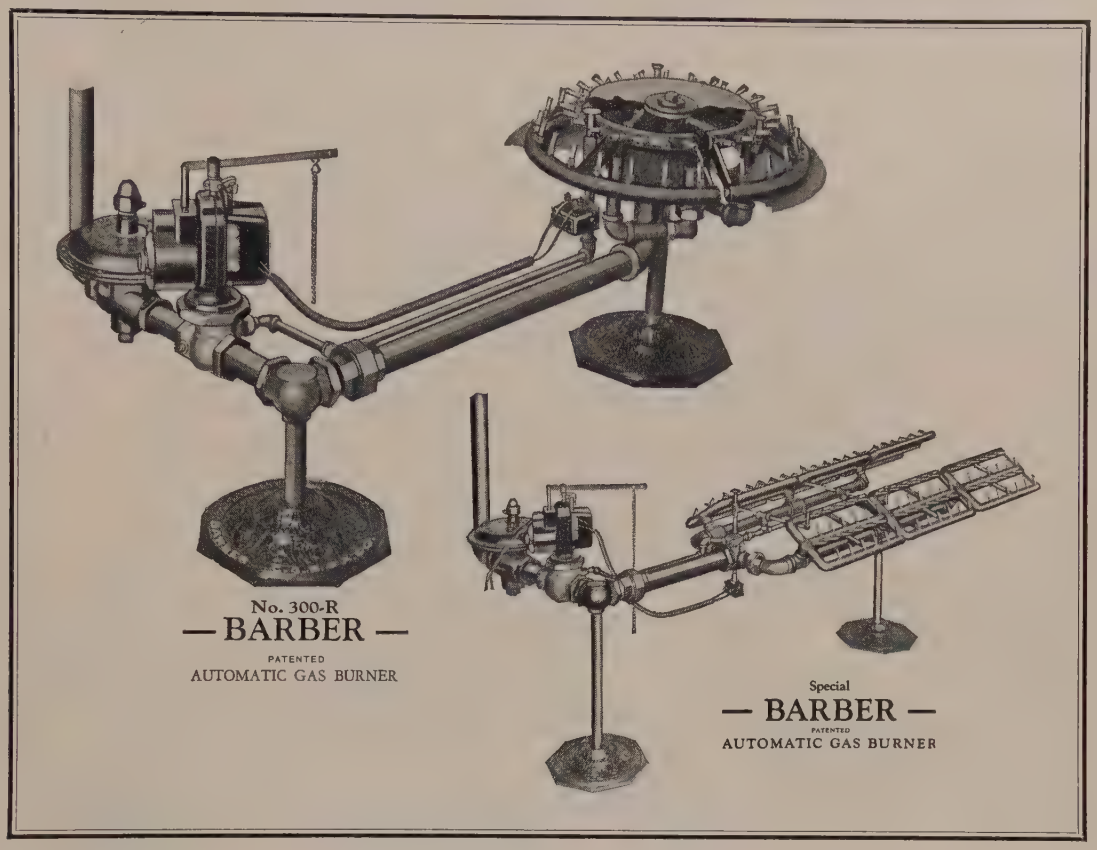
Heating with gas eliminates all worry and work. No coal to shovel. No ashes to carry out. No dust. No soot. No oil tanks. No noise—and nothing to watch or regulate.

You don't have to buy a new boiler or furnace! Just install the Barber AUTOMATIC Gas Burner in your present coal-burning heater. Do it now—and enjoy the luxury and convenience of automatic, carefree heat. Enjoy uniform, healthful temperatures day and night.

The Barber AUTOMATIC Gas Burner makes it easy for any one to enjoy ideal gas heat. Light the burner in the fall of the year—that is all the attention it requires until the following spring, when you turn off the gas for the summer.

You pay for coal before you use it, but you don't pay for gas until after you have enjoyed its use. There is no waste of valuable space given up to coal, wood, and ashes. Your cellar is converted into clean, comfortable quarters for other purposes.

THE CLEVELAND GAS BURNER & APPLIANCE CO., 3702-04 Superior Ave., Cleveland, O.



The Barber Automatic Gas Burner Keeps Your Home Cozy and Warm, and Frees It of All the Disadvantages of Old Style Heating

The Barber Automatic Gas Burner is a very efficient, dependable, and economical house heating machine—backed by many years of experience in heating homes successfully with gas. It is furnished complete with the best known safety and automatic control devices. There are thousands of happy and satisfied Barber Burner users throughout the country. You too will enjoy the comfort and cheer they bring into your home.

BARBER Patent Jet Gas BURNERS

The principle of combustion utilized exclusively in Barber Burners is based upon a scientific discovery that develops the hottest flame temperature and highest efficiency of any gas burner operating on normal pressure. This is repeatedly proved by impartial tests.

When you buy a Water Heater—or other gas appliance, insist upon one equipped with the Barber Burner. No Water Heater—or other gas appliance—is better than its burner. The burner is the "power plant" that furnishes the energy that supplies the service for which the appliance is designed. If the burner fails, the service fails with it. Look inside the Water Heater! If it is equipped with a Barber Burner, you may rest assured that its "power plant" will never fail.

The Barber AUTOMATIC Gas Burner is made in sizes and capacities to meet the heating requirements of all types of round or oblong furnaces and boilers—warm air, steam, hot water, or vapor.

When writing send us the Trade Name, the Number and the Manufacturer's Name of your Furnace or Boiler and we will promptly give you complete information—without obligation to you.

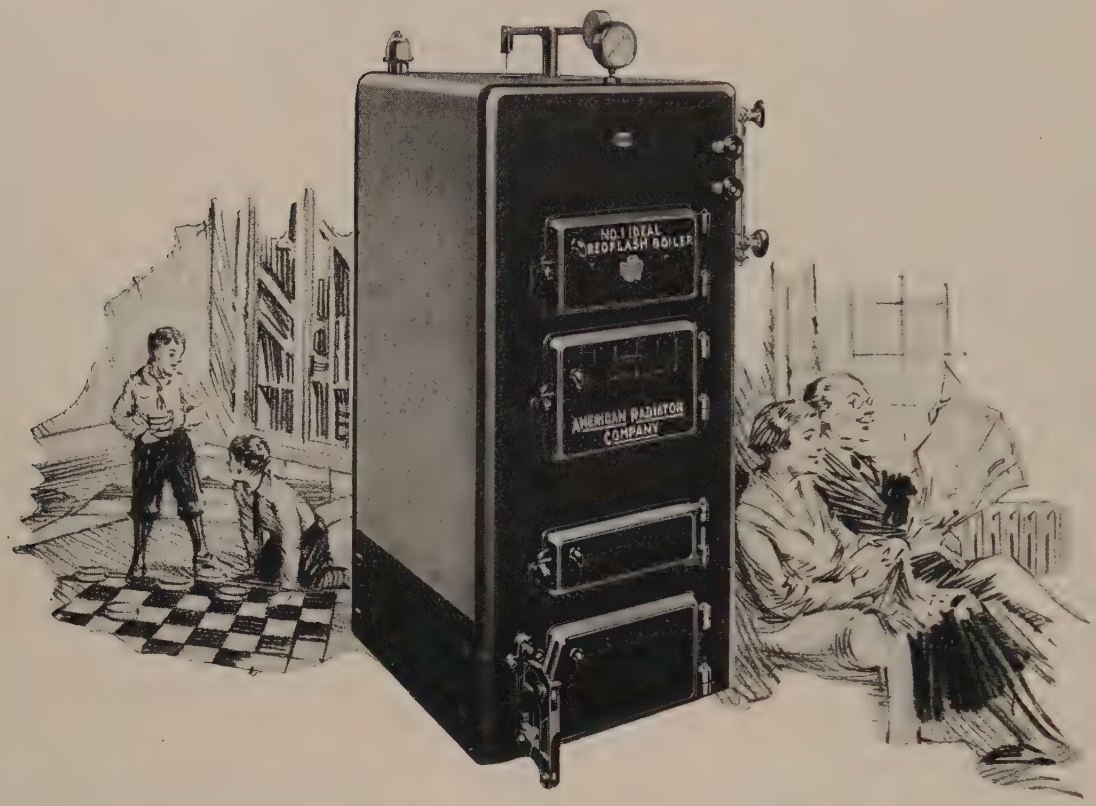
Write us for literature and complete details.

THE CLEVELAND GAS BURNER & APPLIANCE CO., 3702-04 Superior Ave., Cleveland, O.

REDFLASH BOILERS

Uniting Beauty, Efficiency and Durability

Other Products: Hot Water Heaters see pages 282-283
Valves and Fittings see page 259
Heaters see page 246



Modern Sectional Boilers for Every Size of Home or Other Building

Redflash Boilers incorporate scientific principles of design developed during forty years of manufacturing experience and research. The result is a new high standard of heating efficiency.

In addition, the Redflash has achieved a neatness and attractiveness that has revolutionized boiler design almost overnight. The boiler is enclosed in an indestructible, enameled steel jacket that permanently protects a multiply lining of improved asbestocel insulation.

Cleanliness, too, has been built into the Redflash. All door contact surfaces are ground to fit perfectly, to prevent the escape of dust or gas.

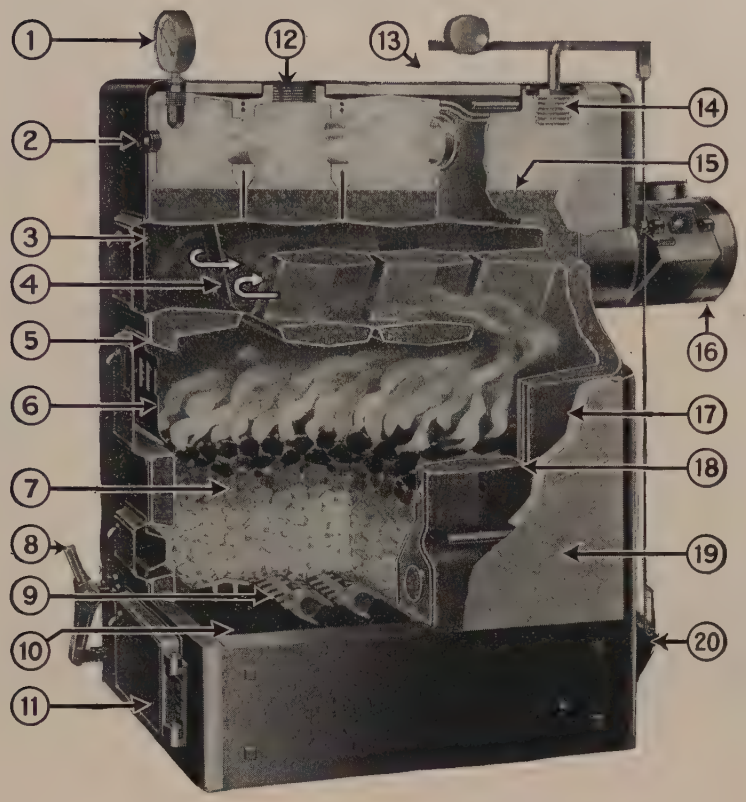
And this combination of neatness, beauty and cleanliness in a large measure has been the inspiration for the modern idea of making the basement useful and livable.

The Redfash offers astonishing freedom from caretaking duties. Large fueling capacity and the efficient Arco Automatic Draft Regulator give even warmth with minimum attention.

In every detail the Redflash is built to give long years of efficient service; yet the price is no more than that of ordinary equipment.

USE AMERICAN RADIATOR BOILERS, RADIATORS,

Burns Hard or Soft Coal, Coke, Oil or Gas



SPECIFICATIONS

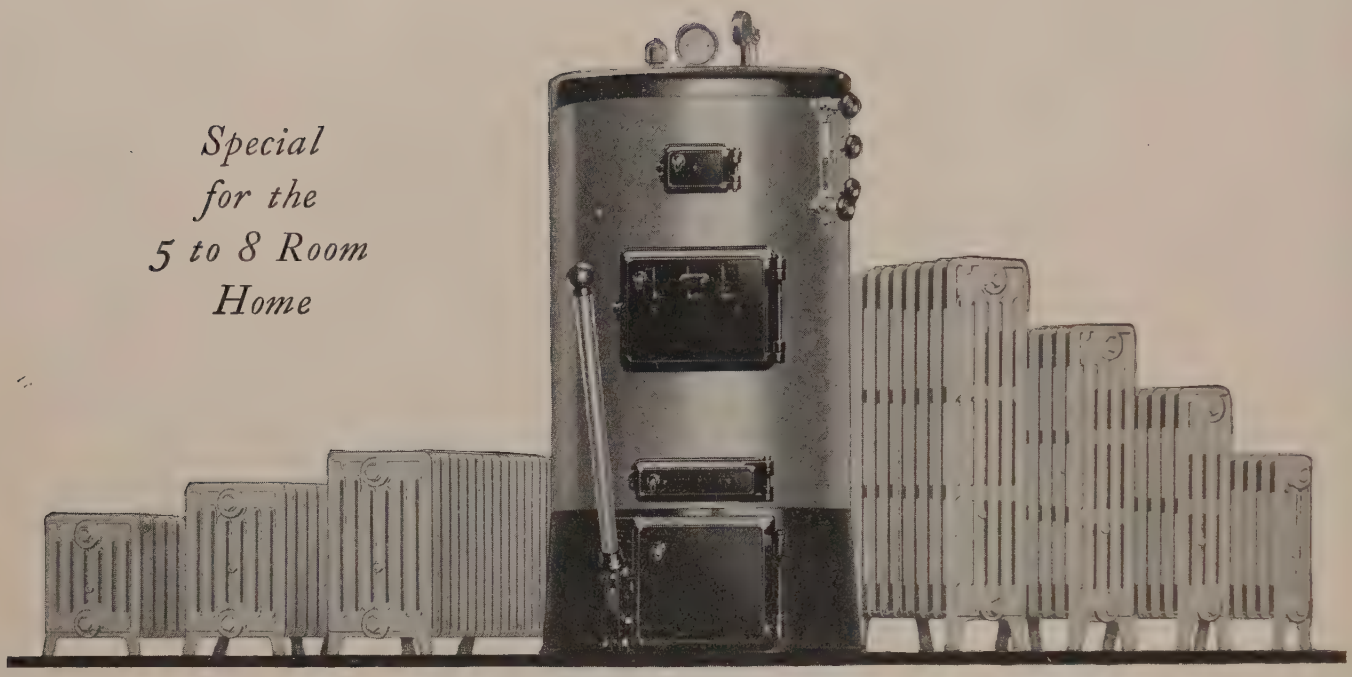
1. Steam gauge and all other accessories provided with steam boiler. Water boiler also completely equipped.
2. Blow-off tapping for cleaning, conveniently located in front.
3. Flue door with curved baffle lining, insures easy gas travel with minimum draft.
4. Long, double-gallery flue for hot gas travel secures high operating economy.
5. All contact-surfaces of doors and sections ground to smooth finish for dust-proof construction.
6. Sturdy fire door with special baffle lining containing secondary air distributor.
7. Large, scientifically proportioned fuel chamber of abundant coal-carrying capacity for long firing periods and easy caretaking.
8. Shaking mechanism, easily operated, durable.
9. Special grates permit use of small size coal, such as buckwheat and pea. Triangular top construction grinds clinkers when grates are shaken, facilitating caretaking. Reinforced trussed construction.
10. Ashpit of ample proportions for easy caretaking with cast iron base of strong, trussed construction.
11. Substantial doors. Plate fittings, hinge pins, etc., all porcelain enamel finished.
12. Flow tapping.
13. Relief valve.
14. Sensitive Arco Automatic Regulation.
15. Large steam dome and disengaging surface.
16. Two-way smokehood with check and choke dampers.
17. Improved type one-inch asbestocel insulation prevents radiant heat loss. Permanently protected by an indestructible steel jacket.
18. New, sealed, seepage-proof construction between sections.
19. Sheet steel jacket with baked enamel finish. Easily cleaned and dusted.
20. Primary draft damper.

For further information consult your heating contractor or write American Radiator Company, 40 West 40th Street, New York. Branch offices in principal cities.

AND ACCESSORIES FOR UNDIVIDED RESPONSIBILITY

ARCOFLASH
HEATING UNITS

Special for the 5 to 8 Room Home



Modern Boilers at New Low Cost

The Arcoflash Heating Unit consists of a modern, completely equipped boiler and the correct amount of American Corto Radiation. It is a quality product which modern production economies and the vast resources of the American Radiator Company have made available at astonishingly low cost.

The boiler is thoroughly insulated with improved asbestocel which is permanently protected by an enameled steel jacket. A large combustion chamber and Arco Automatic Draft Regulation combine to give even warmth with the minimum of attention.

The trim, neat design and the lustrous red and black enamel finish appeal to the most discriminating taste. And the cleanliness achieved by perfectly fitting doors makes possible a modern, livable basement which adds a valuable room to the home.

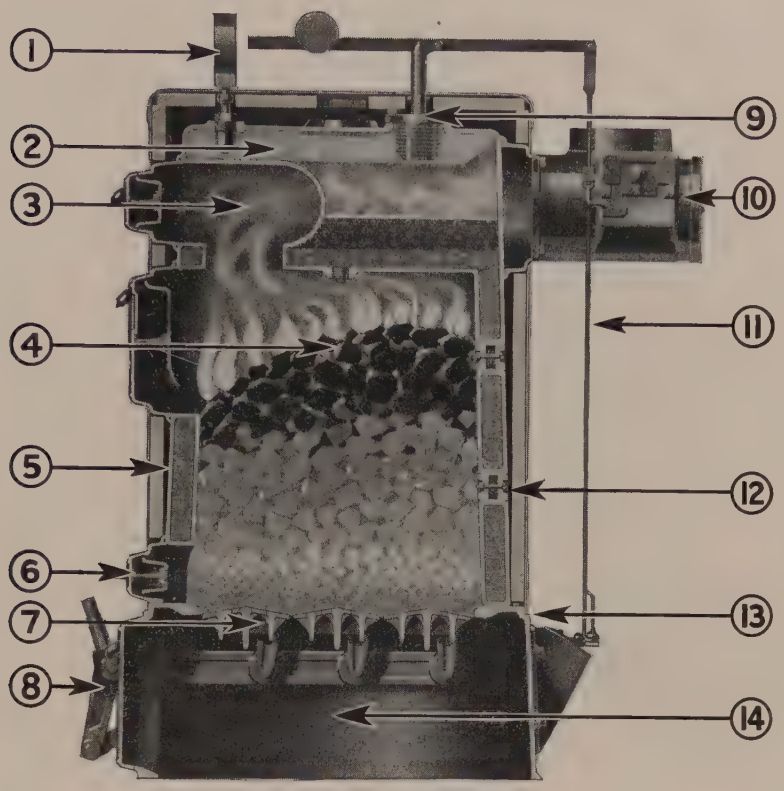
The graceful American Corto Radiator comes in a variety of styles and sizes and suitable types for each installation may be selected as desired.

The low initial cost of the Arcoflash, and its fuel economy, enable every family to enjoy the comfort of radiator heating, with its guarantee of 70-degree warmth in every room.

Moreover, this American Radiator Heating System greatly increases the selling value of property. Owners have learned the importance of adequate heat, and prefer the product of the world's greatest manufacturer of heating equipment.

USE AMERICAN RADIATOR BOILERS, RADIATORS,

Completely Equipped . . . . . Sturdy Construction



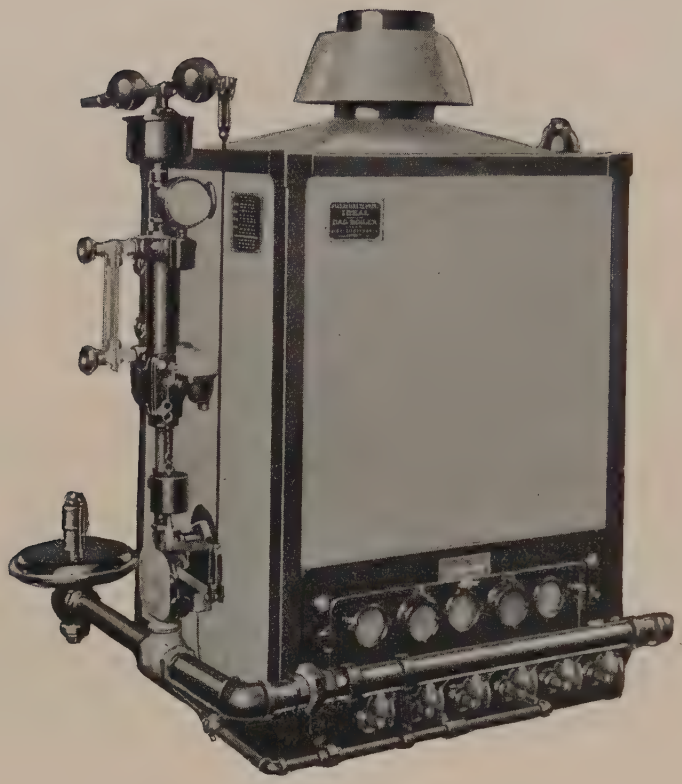
SPECIFICATIONS

1. Steam gauge and all other accessories provided with steam boiler. Water boiler also completely equipped.
2. Large steam dome and disengaging surface.
3. Flue for hot gas travel secures high operating economy.
4. Large, scientifically proportioned fuel chamber of abundant coal-carrying capacity for long firing periods and easy caretaking.
5. Improved type one-inch asbestocel insulation prevents radiant heat loss. Permanently protected by an indestructible steel jacket with baked enamel finish, easily cleaned and dusted.
6. Sturdy fire door has special baffle lining containing secondary air distributor. All contact-surfaces of doors and sections ground to smooth finish for dust-proof construction. Substantial doors. Plate fittings, hinge pins, etc., all porcelain enamel finished.
7. Special grates permit use of small size coal, such as buckwheat and pea. Triangular top construction grinds clinkers when grates are shaken, facilitating caretaking. Reinforced trussed construction.
8. Shaking mechanism, easily operated, durable.
9. Sensitive Arco Automatic Regulation.
10. Two-way smokehood with check and choke dampers.
11. Rod with turn-buckle adjustment, connecting regulator to primary draft damper.
12. Tapping for Excelso Water Heater.
13. Special dust-tight groove for jacket fitting.
14. Ashpit of ample proportions for easy caretaking with cast iron base of strong, trussed construction.

For further information consult your heating contractor or write American Radiator Company, 40 West 40th Street, New York. Branch offices in principal cities.

AND ACCESSORIES FOR UNDIVIDED RESPONSIBILITY

IDEAL GAS BOILERS—*Afford*



Ideal Gas Fired Boiler

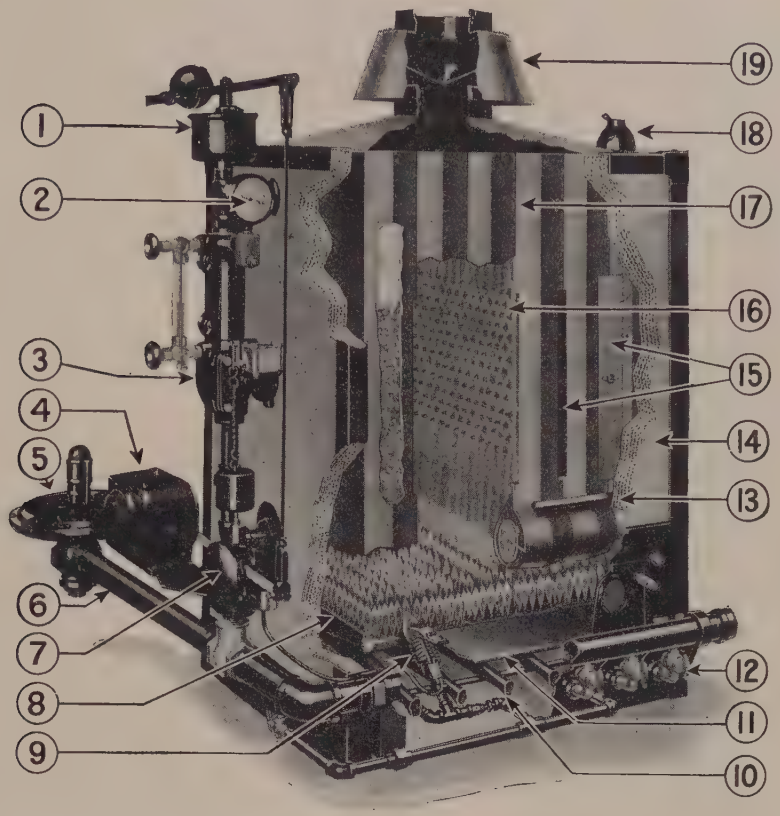
Ideal Gas Fired Boilers combine beauty and efficiency with the convenience and cleanliness of the modern fuel-gas.

Ideal Gas Boilers meet every safety requirement of the American Gas Association. The controls, simple and neat in design, are all centered in one valve. They are absolutely positive in action and practically wear-proof. Our patented pin type heating section has been proved to have the highest degree of heat absorption with the least resistance to the free venting of gases. The section joints are all machine finished. This gives a metal-to-metal gas-tight joint without the use of cement or putty. The draft diverters and canopies of vitreous enameled steel are exclusive features of Ideal Gas Boilers. The compactness, simplicity, efficiency and beauty of Ideal Boilers makes them unequalled in their field.

A size and type is available for every heating need from the smallest dwelling to the largest business or apartment building. For complete information communicate with the nearest American Radiator Branch or with the American Gas Products Corp., 376 Lafayette St., New York, Distributors.

USE AMERICAN RADIATOR BOILERS, RADIATORS,

Constant Care-free, Automatic Warmth



SPECIFICATIONS

1. STEAM REGULATOR
Note: On a water boiler a water regulator is located here.
Controls supply of gas to burners according to predetermined steam pressure or water temperature.

2. RETARD STEAM GAUGE
Note: On water boiler, combination altitude gauge and thermometer located on opposite side of boiler.

3. LOW WATER CUTOFF
Completely shuts off supply of gas to main burners if the water line on steam boiler reaches a low danger point.

4. MOTOR
Operated from the room thermostat. Mounted on and directly connected to No. 596 Throttling Valve.
When No. 600 Snap Action Valve is used, the motor is mounted on the wall. Completely shuts off supply of gas to main burners when room temperature has been attained.

5. GAS PRESSURE GOVERNOR
Maintains a constant gas pressure.

6. GAS SUPPLY LINE
Ample size, permits unrestricted imput of gas.

7. GAS SUPPLY VALVE
Controls gas to burners. All control functions centered in one valve.

8. SILENT BURNER
Raised drilled ports. Blue Flame burner. Silent in operation.

9. THERMOSTATIC PILOT
Protected from moisture or dirt. Keeps gas supply valve closed if pilot is extinguished.

10. VENTURI BURNER TUBE
Induces proper velocity to gas and primary air, and obtains the correct mixture of gas and air.

11. SECONDARY AIR BAFFLE PLATE
Guides the flow of secondary air so that it will pass up through and between the burners assuring proper combustion at the burners.

12. BURNER COCK
Provides individual hand control of gas supply to each burner.

13. THICK ASBESTOS AIR CELL INSULATION
Effectively prevents heat loss from boiler.

14. JACKET
Steel, grey vitreous enameled on both sides. Black steel jacket trimmings, vitreous enameled.
Type 1-G Boilers only have Transite board jackets, with vitreous enameled Jacket trimmings and canopy.

15. CLEANOUT OPENINGS
Provides easy access for cleaning flue surfaces of sections.

16. PATENTED PIN TYPE CAST IRON SECTION
The most effective type of cast iron heat absorbing surfaces.
Rapidly and efficiently absorbs the heat from the rising columns of hot gases, and transfers this heat to the water within.

17. METAL-to-METAL JOINT
Ground, gas-tight. No cement or putty used.

18. POP SAFETY VALVE
A. S. M. E. Standard.

19. DRAFT DIVERTER
Steel, vitreous enameled on both sides having steel vitreous enameled cone, welded in place.
Prevents either excessive drafts or down drafts from affecting proper combustion.

AND ACCESSORIES FOR UNDIVIDED RESPONSIBILITY

BURNHAM BOILERS FOR GENERAL HEATING

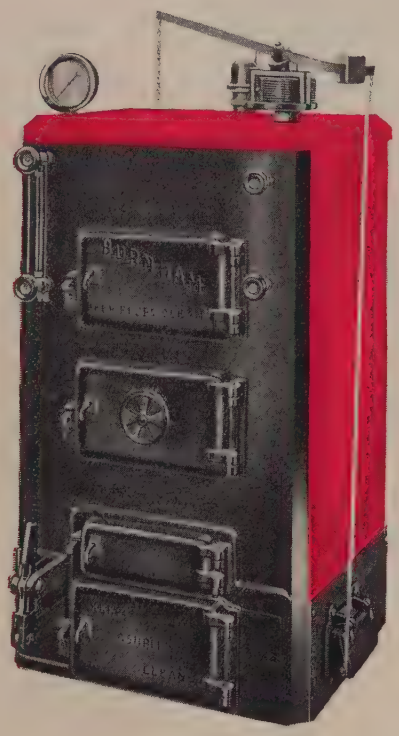
BURNHAM BOILER CORPORATION

IRVINGTON-ON-HUDSON, N. Y.

BRANCHES

BOSTON, MASS., 80 Boylston, Street
CHICAGO, ILL., 1038 So. Kolmar Avenue
SAN FRANCISCO, CALIF., 1385 Harrison Street
QUEENS VILLAGE, L. I., 222nd St. and L. I. R. R.
NEW YORK, N. Y., Graybar Building
TORONTO, ONT., Harbor Commission Bldg.
MONTREAL, QUE., 1410 Stanley Street
SPRINGFIELD, MASS., 153 Plainfield St.
PHILADELPHIA, PA., Bourse Building
BALTIMORE, MD., 12 West Madison Street
LANCASTER, PA., 701 Griest Building
SHANGHAI, CHINA, 62 Kiangse Road

PLANTS: IRVINGTON, N. Y.; ELIZABETH, N. J.; LANCASTER, PA.; ZANESVILLE, OHIO



The New Burnham Boiler Jacketed in Color

For Steam and Hot Water Heating

Here's an entirely new boiler, along the lines especially designed to take its jacket perfectly, with no loss of any essential feature of these Burnham Master Boilers.

It has the Burnham extra long fire travel, that makes the short coal bill.

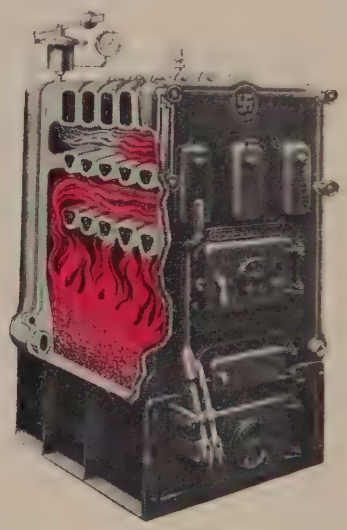
THE JACKET is made of heavy steel. On the outside it is a rich Venetian red, with base and front in black enamel. The enamel used for the jacket is a special non-chip kind, that will not turn color with moisture and heat. The jacket is also enameled inside, to prevent rust.

INSULATION. The back, sides and top are insulated with 4 ply air cell asbestos, the best insulation so far discovered. It does not absorb and hold moisture as some forms of asbestos do.

THE JACKET GOES ON LAST. The jacket goes on after all the setting up work is finished. No chance of its being marred. No danger of leaky connections inside the jacket.

There are no bolt heads to mar the surface of the jacket. Its corners are grooved to fit together without rivets. Two screws, one on each side of the top, are all the fastenings required. All the corners and edges of the top are beveled, protecting them against dents.

Ratings, measurements and full description sent on request.



Burnham Tube Type Boilers—21, 27 and 36 inch series

For Steam and Hot Water Heating

Made with rounded water ways, to give the greatest possible area of inside heat absorbing surfaces. Their three times back and forth fire travel, plainly shown in the picture, gets every bit of usable heat from any fuel; gas, oil or coal. They are therefore very quick to get up heat, and operate economically in mild weather.

Features of the Water Tube Type

—Generous Steam Dome Space, above the water line gives ample room for steam expansion, resulting in dry steam under all conditions.
—Tested to 2½ times the working pressure of 30 pounds for water; five times the working pressure of 15 pounds for steam.
—Double Trussed Grates, ridge shaped, are easy to shake, keeping a clean fire.
—Short Tie Bolts used to fasten the sections together, make erection easier and replacements simple.
—Cleanout Doors are of the new hingeless type.

Ratings and measurements on request.

Burnham Water Tube Type Boilers

At the right is a picture of a single intermediate section of a Water Tube Type Burnham. Note the rounded water ways and the rounded surfaces at the sides and over the fire. The flames and hot gases pass back under these sections, then to the front in the lower flues, and back again through the upper flues. Because of this three way fire travel, and the rounded surfaces inside the boiler, there is the least possible amount of heat to go up the chimney. Just enough to assure a sufficient draft

Burnham Junior Boiler

For Hot Water Supply and Supplementary Heating

What you want for hot water supply is a boiler that will do its work well on a small allowance of fuel; that will require little attention and that will not require replacement for a long time. If your hot water requirements are 175 and 700 gallons tank capacity, you can't do better than to install this busy little worker.

It is made with either cast iron or brass water section; the latter for all brass hot water systems. Specify if brass water section is desired.

Burnham Laundry Stove

For Hot Water Supply

For the average residence, requiring a tank capacity up to 80 gallons, this small stove is particularly designed. Burns very little fuel and requires slight attention. It can be automatically regulated, the equipment being supplied when ordered.

The top is 22 inches wide and can be opened up to full wash boiler width. Made with brass water section also.

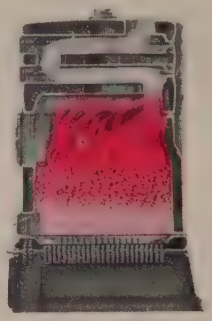
Burnham Round Sectional Boilers

For Steam or Hot Water Heating

Because of their extra long fire travel and large heat absorbing areas, these round sectional boilers are extremely heat thrifty.

The fire pot is completely surrounded with water, and the corrugated crown sheet, directly over the fire is deeply corrugated. This corrugated crown sheet brings three times the heat absorbing area within reach of the radiant heat from the coals, that a flat crown sheet would bring.

Each section you add to this round Burnham adds one complete lap to the length of fire travel, clear across the boiler. In the picture, showing the interior of this boiler, only one intermediate section is shown, giving fire travel three times the width of the boiler. The boiler comes in 4 to 6 section sizes, including base, fire pot and top section.



These boilers are exceptionally easy to keep clean. Cleanout doors between all sections give easy access and there are no bolts or other obstructions to hinder doing a thorough job. All cleanout doors are in front. When used for steam, the top section has a generous steam dome, assuring dry hot steam.

Send for our booklet on heating. It tells all you want to know about heating systems and how they work.

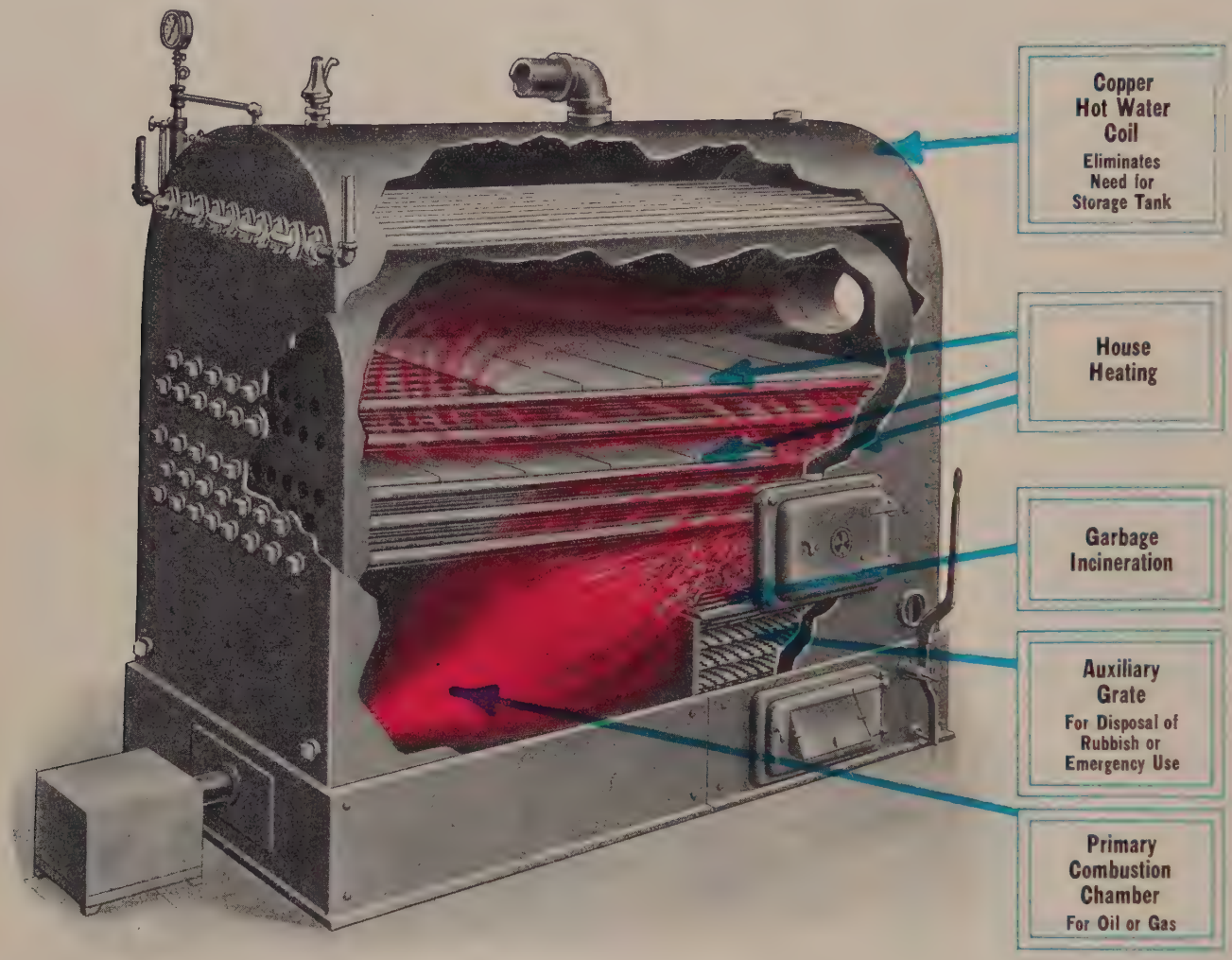
TRIPLE SERVICE BOILER

Heats the Home—Supplies Hot Water—Incinerates Garbage

Burns Oil, Gas or Coal

Made by THE INTERNATIONAL BOILER WORKS CO.

EAST STROUDSBURG, PENNA., U. S. A.



The Purchase of ONE TRIPLE SERVICE BOILER *Eliminates the Purchase of* { Storage Tank, Special Hot Water Heater, Indirect Heater and Incinerator

And Gives You the Finest of Heating Plants

To get the full service from your automatic heating equipment you need a boiler designed and built especially for this service.

The TRIPLE SERVICE BOILER provides your heating system with a modern, scientific unit, contrived to include the whole range of duty that heat is called to perform in the home.

It provides a heating chamber (for steam, hot water or vapor system)—an incinerator for garbage or rubbish—and a domestic hot water supply. Its initial cost is lower than the combined price of separate standard equipment accomplishing these three operations:—it occupies considerably less space; and in operation it will show a marked yearly saving.

Continuous Heating Service

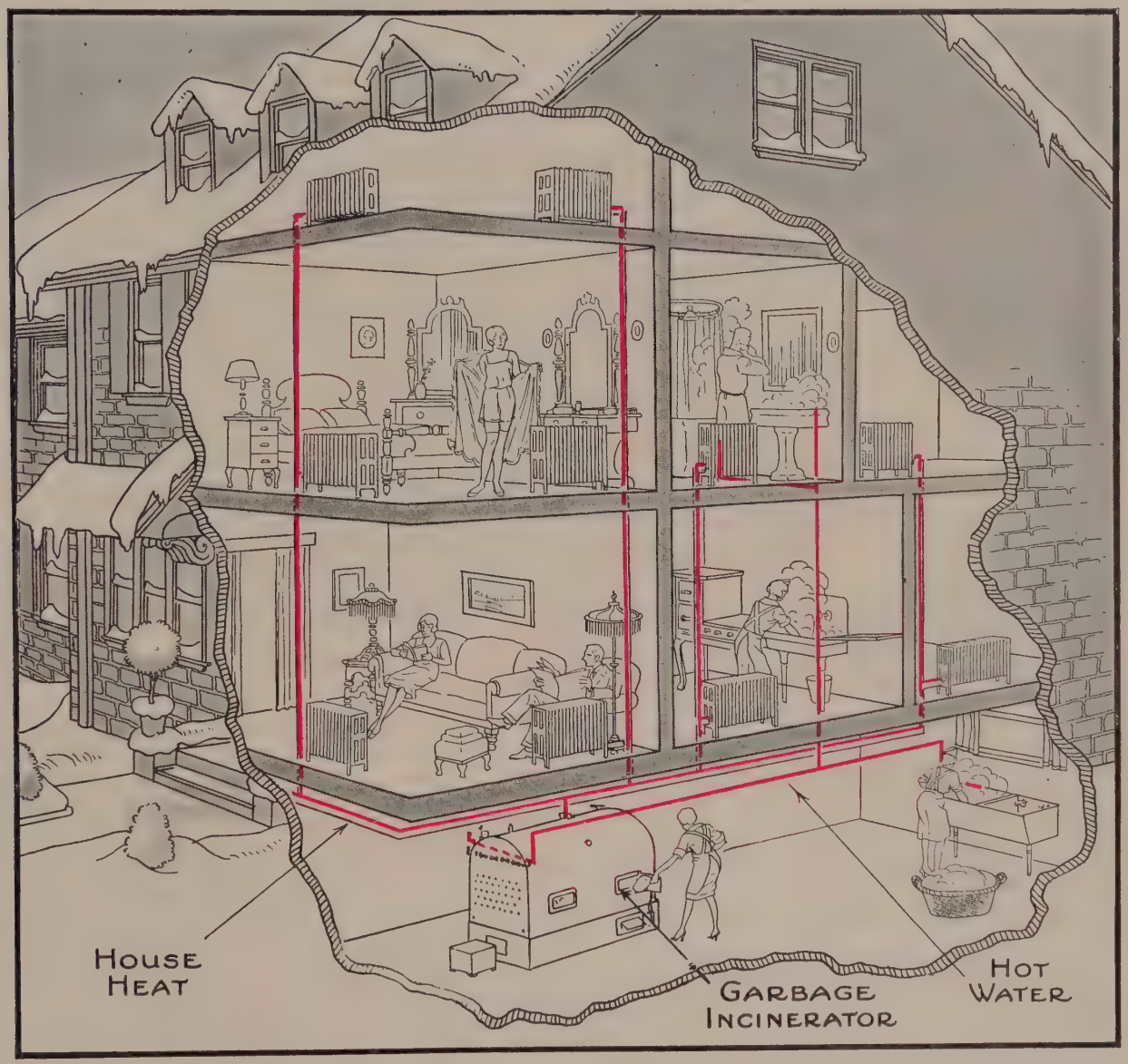
Fuel oil may sometimes run short (or fail in regular delivery)—and electric or gas service may sometimes fail, but provision has been made to keep the Triple Service Boiler in action by including a grate and fire-box for the burning of coal or wood. This auxiliary coal grate can be put into use by simply removing the superficial incinerator grate.

THE INTERNATIONAL BOILER WORKS CO., East Stroudsburg, Penna.

The capacity of this auxiliary grate is sufficient to keep an even temperature in your home indefinitely, until the automatic service is restored.

Triple Service Boilers are welded steel water tube construction, decidedly more efficient than boilers of cast iron. Both the inner and outer shell are electrically welded, including stay bolts and braces, making each boiler a one-piece indestructible unit of heavy steel plate. Every seam and joint is tested under pressure, and will not open nor leak under the most severe strains caused by expansion and contraction. Under normal conditions every Triple Service Boiler will give a lifetime of honest service. It is built in strict conformity with the ASME boiler code. Insurance rates are much lower with a Triple Service than with cast iron boilers.

The Triple Service Boiler puts into practical service a very high percentage of the heat created. Its inner construction creates a remarkably long flue, so baffled that the flaming gases are made to travel back and forth until a maximum of heat absorption has been obtained. The Triple Service Boiler will give more heat at no increase in fuel costs; and your expense for hot water and incineration is practically nothing.



Heat—Hot Water—Garbage Incineration—*In One Compact Unit*

Clean, Odorless Incineration

Complete decomposition of all burnable refuse placed on the incinerator grates is assured. Flue gases pass both over and under these grates, thoroughly drying all garbage before incineration. No ash nor odor can escape to pollute surrounding atmosphere. A large, conveniently located door opens onto these grates.

Hot Water Through Copper Tubes

When you want it—and as much as you want, flowing out of the faucet as long as it is open.

The dome of the boiler is a separate compartment through which the water used in the system is heated to approximately 215°. Submerged in this constant hot bath is the copper and brass coil, one end of which is connected with the regular incoming water supply—the other end connected with the feed pipe of the hot water faucets.

During the summer, this service continues to operate controlled by an Aquastat, which puts the boiler to work only for long enough to raise the boiler water to a temperature that will produce hot water, then automatically shutting off heat. This submerged type system of hot water is the most efficient known and one of the most economical, costing almost nothing when the boiler is used for house heating.

Any further data, as well as specific details and costs of an installation to meet your particular requirements, will be promptly supplied on request.

THE INTERNATIONAL BOILER WORKS CO., East Stroudsburg, Penna.

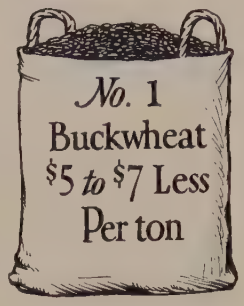
NEWPORT *Magazine Feed Budget Reducing* BOILERS

Manufactured by*—NEWPORT BOILER COMPANY—*Chicago
Distributors All Principal Cities, U. S. and Canada

- - - *for* STEAM, VAPOR, *and* HOT WATER HEATING - - -

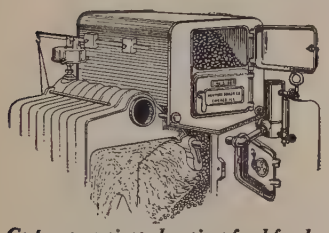
You cut the fuel bill 30 to 50%—that's why the Newport is called the Economy Boiler.

The Newport Boiler burns and delivers all available heat units from No. 1 buckwheat coal which costs from $5.00 to $7.00 less per ton than the larger sizes. In a few heating seasons this saving represents a considerable sum of money, sufficient even to justify replacing any less efficient boiler with a modern Newport.



"We have a 16 room house and start our Newport about October 1st and keep it going until about May 1st. It costs us about $200.00 a year for coal. Our coal bill for the old furnace was $400.00 a year. We keep all three stories at an equal temperature of 75° to 80° without any trouble."—Wm. R. Stackhouse, Moorestown, N. J.

What a convenience when gravity feeds the fuel from the Newport magazine on to the fire.



Cut away view showing fuel feeding into fire from large magazine

The magazine feed Newport needs coaling but once a day in extremely cold weather and not more than two or three times a week in moderate winter weather. The magazine feed of the Newport adds immeasurably to the convenience and peace-of-mind of the average home owner.

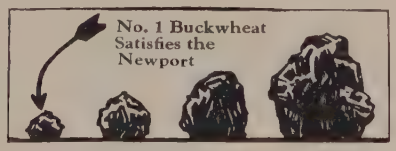
"At the time of remodeling my home I decided, after most careful consideration of all boilers on the market, to install your Newport because I believed its construction correct, along advanced lines in economy, and simple of operation. Now for seven winters it has been exceedingly satisfactory from every viewpoint."—Charles A. Upson, Lockport, N. Y.

Buy the kind or size of fuel most economical in your district.

No matter how little attention a boiler needs, it is inconvenient if it requires one particular kind of fuel to render its full heating efficiency.

The Newport Magazine Feed Boiler with its patented adjustable fuel throat permits burning many sizes of anthracite, coke, and even bituminous coal.

"My Newport is very satisfactory—all that you ever told me about it was more than justified. It needs very little attention and we are always comfortable."—C. E. Anstett, New York City.



THE importance of installing a boiler which will produce even heating cannot be over-estimated because uniform temperature at all periods of the day is absolutely essential to human comfort and health.

This size for smaller homes

Operating on its unique magazine feed principle, the Newport Boiler employs gravity to maintain an even fire-bed which burns fast or slow according to the temperature demanded by the owner. It is automatically controlled by a sensitive governing regulator—regular equipment.

FIFTEEN YEARS SUCCESSFUL HEATING
is Newport's best recommendation to you.
Ten million dollars of company assets behind the
NEWPORT GUARANTEE.

Specific Features of Design and Construction

1. Maximum Heating Surface.
2. Flues that prevent Heat loss through Chimney.
3. Easy Cleaning.
4. Rapid Circulation in Waterways.
5. Low—40½" Waterline.
6. Quick and Easy Starting and Rekindling.
7. Low Return Inlets.
8. Large Cast Iron Push Nipples.
9. Convenient Self-closing Fire Doors.
10. Air-cooled Center Grate Rest.
11. Double Capacity Magazine.
12. Adjustable Water Cooled Throat, a Newport Feature of Major Importance.
13. Simple Two-piece Grates.
14. Combined Side Grate and Connecting Bar.
15. Ash Spray to Keep Basement Tidy.
16. Oversized Ash Pit.
17. Automatic Damper Regulator.
18. Draft and Check Dampers.
19. Construction — Semi-steel Castings.
20. Half of Boiler usable at a time.

SEND FOR—Our complete descriptive catalogue *"THE PRACTICE OF SCIENTIFIC HEATING."*

NEWPORT BOILER COMPANY, Chicago, Illinois
(DIVISION HART PARR COMPANY) 529 S. FRANKLIN STREET

NEWPORT *Magazine Feed Budget Reducing* BOILERS

***For all sizes of* Coal *or* Coke—*also ideal for* Oil *or* Gas**

NEWPORT BUILDS A SIZE FOR EVERY HOME

This size for larger homes and apartments

NEWPORT MAGAZINE FEED BOILERS

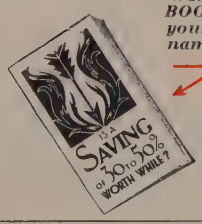
This diagram shows the unique magazine feed principle of Newport Boilers. You fill the magazine once a day to two or three times a week, as the weather demands. As the fire burns, gravity feeds down more fuel and maintains an even fire-bed.

Successful investment builders have installed thousands of Newports in residences built for sale.

These experienced builders have done much to popularize many features of the modern home. Better plumbing, more electric outlets, tile bathrooms, complete insulation—these and many other up-to-the-minute improvements are today widely available to home-buyers because investment builders have seized upon them—they know Newports help sell the building.

What, they reason, could be more important than the heating plant upon which the comfort and even the health of the home's occupant so directly depend? It is a mark of singular distinction, therefore, that the contractor builder has so universally registered his approval of the Newport's convenience, fuel economy, and heating efficiency. You may be sure that in following his example in installing the Newport, you will be making a wise investment.

WRITE FOR THIS BOOKLET—Send us your heating man's name and your own



Make this Saving $1,450 in Fifteen Years

10 tons of coal at $6.00 per ton—$60.00 invested yearly with compound interest at 6%

NEWPORT BOILER COMPANY, Chicago, Illinois

DIVISION HART PARR COMPANY) 529 S. FRANKLIN STREET

Richardson Boilers for Steam and Hot Water Heating

Manufactured by RICHARDSON & BOYNTON CO.

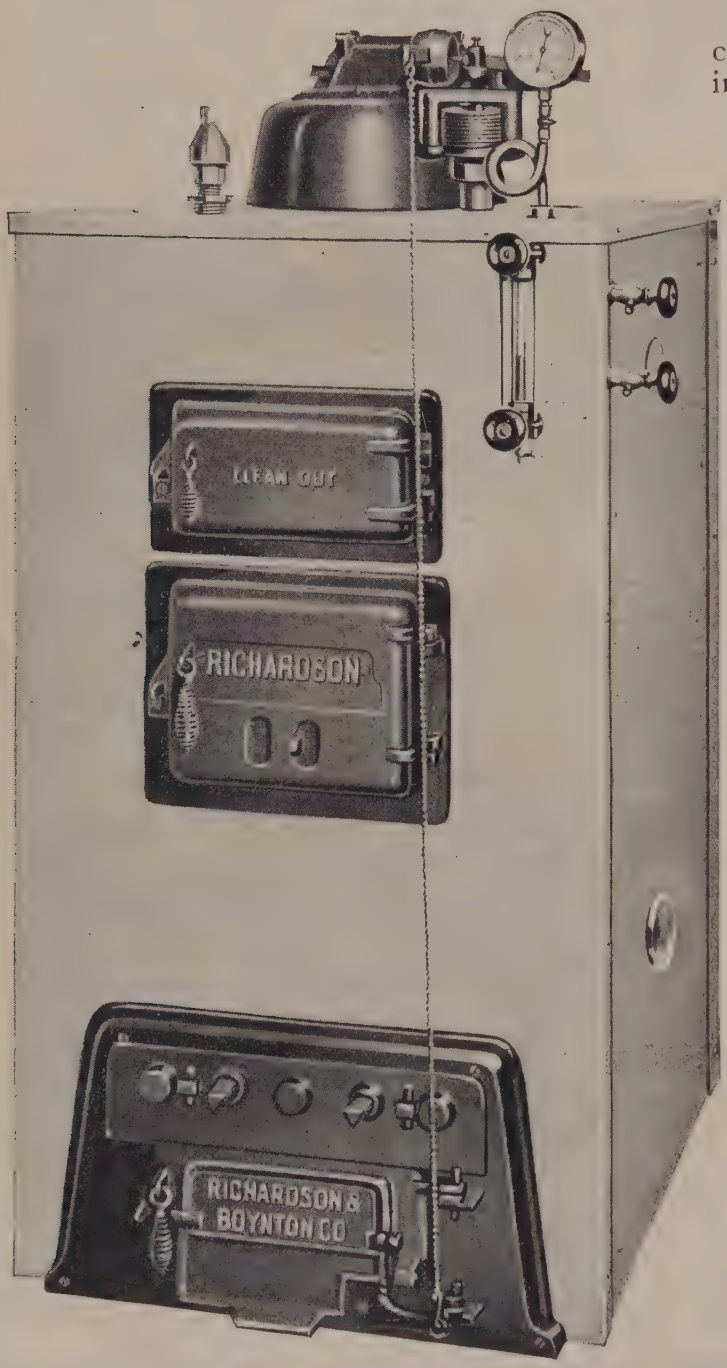
260 Fifth Ave., New York City—Utica, N. Y.

Since 1837

For Branch Offices See Page 248

Other Products

Warm Air Heaters, Pipeless Furnaces, pages 248, 249. Hot Water Supply Boilers, page 290.



The "Richardson" Round Cased Boiler

Color is the keynote of the smart home today. Kitchen, bathroom, porch and now the cellar—all are brightened up by this charming new touch.

Introduced by noted architects and acclaimed by all America, the magic of color in the home is here to stay.

Modernize your cellar with the gleaming blue of the "Richardson" Square Cased Boiler. Transform it into a play room, card room, billiard room, a den or any of the extra rooms that are part of the modern home. The Boiler can be kept clean as any piece of furniture and it will retain its beautiful finish for years and years.

Finish

The outer casing is finished with high lustre blue Japan that is durable, easy to clean and will not crack or peel. The doors, ashpit front and smoke box, in other words, all cast iron parts not covered by the casing are coated with black enamel.

Insulation

The lining or insulation of the "Richardson" boiler is 1″ 8-ply asbestos air cell and is attached to the cases when shipped. It thus cannot be damaged in transit or in handling. The air space between the heating unit and the outer casing provides extra heat conserving insulation.

No.	Grate Area Sq. Ft.	Inlets and Outlets No. and Size	Square of Jacket Inches	Steam Only			Water Only	
				Rating Sq. Ft.	Height to Top Outlet Inches	Height Water Line Inches	Rating Sq. Ft.	Height to Top Outlet Inches
1-S/W-1	1.58	2-2½	26¾	350	49½	44¼	550	42¾
1-S/W-2	1.58	2-2½	26¾	425	53¾	48½	675	47
1-S/W-3	2.18	2-3	29¾	550	50½	45¼	850	43¾
1-S/W-4	2.18	2-3	29¾	650	54¾	49½	1050	48
1-S/W-5	2.89	2-3	32¾	800	53½	48¼	1350	45¾
1-S/W-6	2.89	2-3	32¾	900	57¾	52½	1500	50
1-S/W-7	3.70	2-3½	36¼	1050	55½	49½	1700	47⅛
1-S/W-8	3.70	2-3½	36¼	1150	59¾	53¾	1900	51⅜
1-S/W-9	4.59	2-3½	41	1300	60	53½	2100	50½
1-S/W-10	4.59	2-3½	41	1425	65⅜	58⅞	2300	55⅞

RICHARDSON & BOYNTON CO., New York City—Utica, N. Y.

Richardson Round Sectional Boilers
for Steam, Vapor and Hot Water

These boilers are particularly adapted for private residences as they are simple and easy to operate, powerful and economical. They have large feed doors for firing and ample cleanout and ashpit doors and will carry sufficient fire over night so that the house is warm in morning. Water boilers have a special dome section for water heating and wall waterways through boiler are small producing a rapid circulation of water over heating surfaces and absorbing the heat units as they are given off from the fire and heated gases. All heating surfaces are within boiler and surrounded by water passages.

Construction

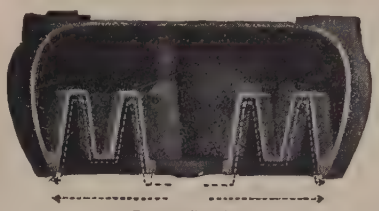
Round boilers for steam and hot water made up of several sections. The base section is fitted with "Perfect" revolving triangular grate bars which are durable and very effective in keeping the fire clear and free from clinkers. Ash pits have large doors, fitted with an air inlet butterfly draft door for supplying oxygen to fuel. This draft door is operated from the automatic damper regulator of steam boilers, and with a ratchet on water boilers.

Base and Grate Section

The fire pot section is above the ash pit, is heavily corrugated on the inside. Fire pot is deep so that fire can be run at low rate of combustion and only require attention at long intervals. These sections are fitted with two openings in the rear so water for domestic purposes can be heated from a coil in fire box. Flue openings are arranged so that fire travel is staggered—the opening in one section going below the heating surfaces in the section above—so there is not waste of heat.

Fire Pot Section

Connections between all sections are made with extra heavy machine cut tapered cast iron nipples fitted into tapered openings in the section, thus making a perfectly tight iron to iron joint, without the use of any lead or packing.



Dome Section

The top or dome section offers a large amount of heating surface which produces ample heat with an economical consumption of fuel.

Every Richardson Boiler has a deep fire chamber with corrugated sides and over the fire a large amount of active heating surface, properly proportioned for the rating of boilers.

All boilers have cored openings in fire pot for coil; and steam boilers have tapping in dome section, right side, for indirect water heater. Steam Boilers can be fitted with fusible plugs.

All boilers can be arranged with grates for burning the smaller sizes of coal.

Steam—Front View

Water—Front View

Steam—Sectional View

RICHARDSON & BOYNTON CO., New York City—Utica, N. Y.

19 Series Round Sectional

No.	Height to Top Outlet Inches	Nom. Diam. Grate Inches	Grate Area Sq. Ft.	Height Water Line Inches	Outlets No. and Size	Inlets No. and Size	Rating Sq. Ft.
Steam							
1190	47½	19	1.97	42½	2–2½	2–2½	**400**
1191	51½	19	1.97	46½	2–2½	2–2½	**450**
1192	55½	19	1.97	50½	2–2½	2–2½	**500**
Water							
1190	45¼	19	1.97	.....	2–2½	2–2½	**650**
1191	49¼	19	1.97	.....	2–2½	2–2½	**725**
1192	53¼	19	1.97	.....	2–2½	2–2½	**800**

Size of smoke-pipe 19 in. Series, 8 in.

28 Series Round Sectional

No.	Height to Top Outlet Inches	Nom. Diam. Grate Inches	Grate Area Sq. Ft.	Height Water Line Inches	Outlets No. and Size	Inlets No. and Size	Rating Sq. Ft.
Steam							
1281	55¾	28	4.28	51	2–3½	2–3½	**1200**
1282	59¾	28	4.28	55	2–3½	2–3½	**1300**
1283	63¾	28	4.28	59	2–3½	2–3½	**1400**
Water							
1281	53¼	28	4.28	.....	2–3½	2–3½	**1800**
1282	57¼	28	4.28	.....	2–3½	2–3½	**2000**
1283	61¼	28	4.28	.....	2–3½	2–3½	**2200**

Size of smoke-pipe 10 in.

End Feed Square Sectional Boilers for Steam, Vapor and Water

These boilers are made in sizes to meet any steam, hot water or vapor heating requirement. Their principal features are the ease with which they are operated, their ability to carry their ratings for long periods and economical operating expense. This means securing the proper proportion and arrangement of the heating surface to the grate area with large flues, admitting of a low rate of combustion.

Richardson boilers present a large amount of correctly proportioned direct heating to the fire, yet with a long fire travel to hold back gases and prevent their too rapid escape to the smoke outlet. Equipped with deep fire pots and high combustion chambers. Ample provision has been made for easy firing and cleaning. Two large upper doors give access to flue surface for cleaning. Fire door is high and wide and through slicer door all parts of grate can be thoroughly cleaned. Ash pit is high and large permitting easy removal of ashes. All boilers have cored openings in back section for coil; and steam boilers are tapped on third section from front (right side) for indirect water heat. Steam boilers can be fitted with fusible plugs.

Grate bars are extra heavy sectional shaking and dumping pattern, operated in sections from the front of the boiler and controlled by a lock plate permitting the bars to be shaken, dumped or locked in position, as desired. Grates can be furnished for burning either large or small size coal.

Any connections between the sections are made with extra heavy cast iron machine cut tapered slip nipples fitted into tapered openings in the section and making the boiler absolutely tight.

Guarantee

Every Richardson Boiler is sold under a guarantee as to its perfection in manufacture and its ability to carry the rating shown in our printed matter, providing that a sufficient amount of radiation is installed, the piping system properly run, and the boiler connected to a flue of sufficient size and draft for the size of the fire box.

21 Series End Feed Sectional

No.	Total Length Inches	Grate Area Sq. Ft.	Water Line Inches	*Outlets Inches	Ashpit (Inside) Inches	Rating Sq. Ft.
Steam						
214	36	**2.27**	43	1–3	22x24½	**650**
215	42¼	**3.01**	43	1–3	22x30¾	**850**
216	48½	**3.75**	43	2–3	22x37	**1050**
217	54¾	**4.49**	43	2–3	22x43¼	**1250**
218	61	**5.23**	43	3–3	22x49½	**1450**
Water						
214	36	**2.27**	.....	2–3	22x24½	**1050**
215	42¼	**3.01**	.....	2–3	22x30¾	**1375**
216	48½	**3.75**	.....	3–3	22x37	**1700**
217	54¾	**4.49**	.....	3–3	22x43¼	**2025**
218	61	**5.23**	.....	3–3	22x49½	**2350**

Castings only. Height, 49½ in. Width, 32 in.
*For each outlet there are two inlets of the same size, one on each side. Size of smoke-pipe, 9 in.

22 and 25 Series Round Sectional

No.	Height to Top Outlet Inches	Nom. Diam. Grate Inches	Grate Area Sq. Ft.	Height Water Line Inches	Outlets No. and Size	Inlets No. and Size	Rating Sq. Ft.
Steam							
1221	53	22	2.64	48¼	2–2½	2–2½	**600**
1222	57	22	2.64	52¼	2–2½	2–2½	**675**
1223	61	22	2.64	56¼	2–2½	2–2½	**750**
1251	54¼	25	3.41	49½	2–3	2–3	**825**
1252	58¼	25	3.41	53½	2–3	2–3	**900**
1253	62¼	25	3.41	57¼	2–3	2–3	**975**
Water							
1221	50½	22	2.64	.....	2–2½	2–2½	**1000**
1222	54½	22	2.64	.....	2–2½	2–2½	**1100**
1223	58½	22	2.64	.....	2–2½	2–2½	**1200**
1251	52	25	3.41	.....	2–3	2–3	**1400**
1252	56	25	3.41	.....	2–3	2–3	**1500**
1253	60	25	3.41	.....	2–3	2–3	**1600**

Size of smoke-pipe 22 in. Series, 9 in.; 25 in. Series, 10 in.

32 Series End Feed Sectional

No.	Total Length Inches	Grate Area Sq. Ft.	Water Line Inches	Outlets Inches	Return Inches (Rear Section)	Ashpit (Inside) Inches	Rating Sq. Ft.
Steam							
325	36½	**6.66**	48	2–4	2–4	42⅞x36½	**1675**
326	43⅞	**8.33**	48	2–4	2–4	42⅞x43⅞	**2100**
327	51¼	**10.00**	48	3–4	2–4	42⅞x51¼	**2525**
328	58⅝	**11.67**	48	3–4	2–4	42⅞x58⅝	**2950**
329	66	**13.34**	48	4–4	2–4	42⅞x66	**3375**
Water							
325	36½	**6.66**	.....	2–4	2–4	42⅞x36½	**2700**
326	43⅞	**8.33**	.....	2–4	2–4	42⅞x43⅞	**3350**
327	51¼	**10.00**	.....	3–4	2–4	42⅞x51¼	**4000**
328	58⅝	**11.67**	.....	3–4	2–4	42⅞x58⅝	**4650**
329	66	**13.34**	.....	4–4	2–4	42⅞x66	**5300**

Castings only. Height, 55 in. Width, 39 in.
Size of smoke-pipe, 12 in.

39 Series End Feed Sectional

No.	Total Length Inches	Grate Area Sq. Ft.	Water Line Inches	Outlets Inches	Return Inches (Rear Section)	Ashpit (Inside) Inches	Rating Sq. Ft.
Steam							
395	41¼	**9.20**	56	2–5	2–5	49⅝x41¼	**2350**
396	49⅝	**11.50**	56	2–5	2–5	49⅝x49⅝	**2900**
397	58	**13.80**	56	3–5	2–5	49⅝x58	**3450**
398	66⅜	**16.10**	56	3–5	2–5	49⅝x66⅜	**4000**
399	74¾	**18.40**	56	4–5	2–5	49⅝x74¾	**4550**
Water							
395	41¼	**9.20**	.....	2–5	2–5	49⅝x41¼	**3750**
396	49⅝	**11.50**	.....	2–5	2–5	49⅝x49⅝	**4600**
397	58	**13.80**	.....	3–5	2–5	49⅝x58	**5450**
398	66⅜	**16.10**	.....	3–5	2–5	49⅝x66⅜	**6300**
399	74¾	**18.40**	.....	4–5	2–5	49⅝x74¾	**7150**

Castings only. Height, 63 in. Width, 47 in.
Size of smoke-pipe, 14 in.

RICHARDSON & BOYNTON CO., New York City—Utica, N. Y.

Weil-McLain BOILERS FOR THE HOME

and for other small and medium sized buildings

Weil-McLain Company,
General Offices,
Chicago, Illinois.

Boiler factory,
Michigan City, Indiana.
Radiator Factory, Erie, Pa.

For complete information, see your local heating contractor. He will help you select a boiler that is adapted to your building, its draft conditions, local fuel preferences and other factors. Quick and reliable service to your heating contractor is available through the following distributors. Stocks of Weil-McLain boilers are carried at all these points.

CONNECTICUT:	
Bridgeport	Seeley & Jones, Inc.
Hartford	J. L. Purcell, Inc.
Meriden	New Haven Plumbing Supply Co.
New Haven	New Haven Plumbing Supply Co.
ILLINOIS:	
Chicago	Weil-McLain Co. (General Offices)
Galesburg	May Co.
Peoria	Nailon Bros. Co.
Rockford	Van Denberg Supply Co.
INDIANA:	
Evansville	Plumbers Supply Co., Inc.
Indianapolis	August Buschmann & Sons, Inc.
Logansport	Baker Specialty & Supply Co.
Michigan City	Weil-McLain Co. (Factory)
IOWA:	
Des Moines	Globe Machinery & Supply Co.
Dubuque	Kretschmer-Tredway Co.
Ft. Dodge	Leighton Supply Co.
Sioux City	Wigman Co.
KENTUCKY:	
Lexington	Plumbers Supply Co., Inc.
Louisville	Plumbers Supply Co., Inc.
MARYLAND:	
Baltimore	Chas. Linhardt, Jr. (2126 Edmondson Ave.)
MASSACHUSETTS:	
Boston	Johnson-Washburn Co.
	Jos. H. Young Co.
MICHIGAN:	
Detroit	Anchor Pipe & Supply Co.
Grand Rapids	Richards Mfg. Co.
MINNESOTA:	
Duluth	Duluth Plumbing Supplies Co.
St. Paul	Peerless Northern Co.
MISSOURI:	
St. Louis	R. A. Dubuque Supply Co.
NEW JERSEY:	
Atlantic City	Fleck-Atlantic Co.
Camden	Fleck Bros. Co.
Elizabeth	Elizabeth Plbg. & Htg. Supply Co.
Newark	Eaton-Kent, Inc.
NEW YORK:	
Albany	Interstate Plumbing Supply Co.
Brooklyn	Simon Gasner & Sons Co.
	B. F. Gilmour Co., Inc.
Buffalo	Bushnell-Felton, Inc.
Mineola	Mineola Plumbing Supply Co.
New York City	E. Schwartz Plbg. Supply Co.
	E. Smolka Plumbing Supply Co.
Plattsburg	The Blodgett Supply Co., Inc.
Port Chester	Central Plumbers Supply Co.
Poughkeepsie	Interstate Plumbing Supply Co.
Rochester	The Boiler and Radiator Corp.
Syracuse	W. G. Shafer Co., Inc.
Utica	Roberts Plbg. & Htg. Supply Co.
NORTH CAROLINA:	
Raleigh	Noland Co., Inc.
Winston-Salem	Noland Co., Inc.
OHIO:	
Cincinnati	The Mutual Mfg. & Supply Co.
Cleveland	The W.M. Pattison Supply Co.
Dayton	The W. H. Kiefaber Co.
Youngstown	The Schley & Nash Co.
PENNSYLVANIA:	
Allentown	Lehigh Valley Supply Co. (Branches at Easton, Lansdale, Stroudsburg)
Erie	Weil-McLain Co. (Factory)
Harrisburg	Raub Supply Co.
Lancaster	Raub Supply Co.
Lansdowne	Fleck Bros. Co.
Philadelphia	Fleck Bros. Co.
Pittsburgh	The Schley & Nash Co.
Reading	Reading Foundry & Supply Co. (Branches at Pottstown, Pottsville)
Wilkes-Barre	Raub Supply Co.
RHODE ISLAND:	
Providence	Providence Pipe & Sprinkler Co.
TENNESSEE:	
Bristol	Noland Co., Inc.
VERMONT:	
Burlington	The Blodgett Supply Co., Inc.
VIRGINIA:	
Roanoke	Noland Co., Inc.
WISCONSIN:	
Milwaukee	Cordes Supply Co.
	Weil-McLain Co.
CANADA:	
St. John	The James Robertson Co., Ltd
Toronto	The James Robertson Co., Ltd
Winnipeg	The James Robertson Co., Ltd

Weil-McLain Boilers excel in fuel combustion, heat utilization and convenient operation

Fuel combustion

Weil-McLain Boilers have long been famous for scientific combustion of the fuel. Due to perfection of design, the fuel in Weil-McLain Boilers is more thoroughly burned. The fire burns bright and clean at *every* point. It lasts a long time and requires only infrequent attention. Costly waste down into the ashpit is thus ended.

Heat utilization

Probably never has there been a line of boilers in which the factor of heat utilization has been given such painstaking care. Weil-McLain Boilers have an exceptional amount of heat-absorbing surface directly above the fire, and a balanced back-and-forth fire travel that cannot short cut to the chimney under *any* condition.

Owner's convenience

In Weil-McLain Boilers convenient operation has been developed to a high point. In these boilers there is added combustion space and extra fuel carrying capacity which lengthen the firing periods. Unusually high ashpits and convenient control of the dampers facilitate operating attention.

Meeting modern fuel trends

Weil-McLain Boilers have been designed, not only in keeping with present fuel preferences, but with particular forethought for the burning of oil, or coke, for the smokeless burning of soft coal and the use of smaller sizes of hard coal.

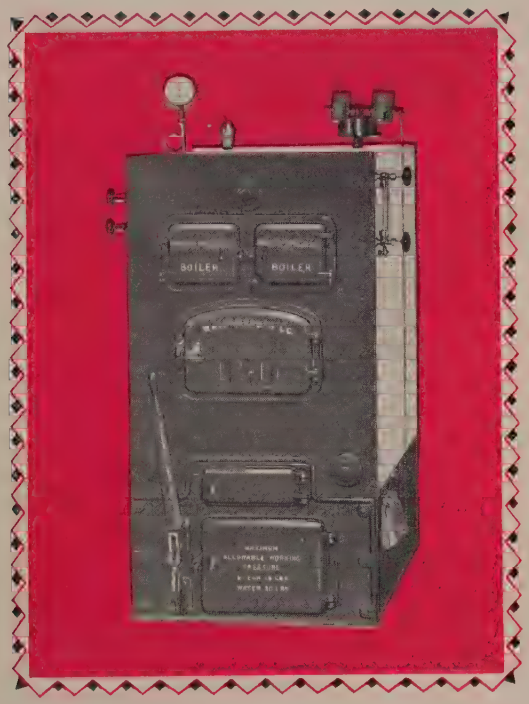
In short, Weil-McLain Boilers show evidences at every hand of scientific research, skillful engineering, and careful thought for the user of the boiler. They are supremely efficient. *They fight fuel waste.*

For further details write Weil-McLain Company, General Offices: 641 West Lake Street, Chicago. Factories and Offices: Michigan City, Indiana-Erie, Pa.

WEIL-McLAIN COMPANY - - - CHICAGO, ILLINOIS

Jacketed Weil-McLain SCIENTIFIC COMBUSTION BOILERS Type

A boiler of the newer vogue



Scientific combustion

In the Weil-McLain Jacketed Boiler you find two distinct reasons for scientific combustion. First, all grates within the fire box are *shaking* grates; second, this feature, combined with rounded "live fire" corners in the fire box, assures a clean, bright fire at *every* point, and ends costly waste of fuel into the ashpit.

Added heating surface above the fire

Realizing that it is of little avail for a boiler to produce a great volume of heat only to be wasted up the chimney, Weil-McLain has incorporated in this boiler the basic principle of more heating surface, particularly above the fire.

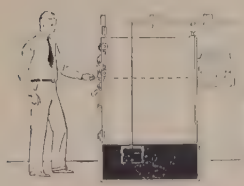
Balanced back-and-forth fire travel

As a final safeguard against waste, in this Weil-McLain Boiler there is a balanced back-and-forth fire travel, which cannot short cut to the chimney under any condition. The hot gases, under *all* conditions, must travel through *all* the heating surfaces in the boiler. Another reason why this boiler assures warm rooms and fuel economy.

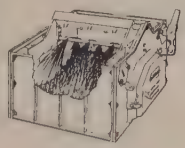
Owner's convenience

In this boiler you will find convenience features such as have seldom been incorporated in a boiler. For example, the choke damper is conveniently controlled from the *front* of the boiler. There is an extra high ashpit. There is automatic draft regulation. And the boiler, from every standpoint, has been designed to make possible minimum firing attention.

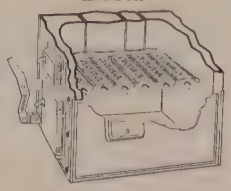
Showing the front control of the choke damper



Note how all the fuel rests on *shaking* grates



Showing the rounded "live fire" corners in the fire box



Round Weil-McLain SCIENTIFIC COMBUSTION BOILERS Type

One of the most efficient boilers ever built

Oil Burning

Designed with special thought for its adaptability for oil burning, this boiler has large water spaces and large nipple openings for free circulation to utilize the quick heat from oil burners.

In this popular boiler you will find many sound and practical features that prevent waste up the chimney and result in better utilization of the heat produced by the fire.

Corrugations like this

In the crown sheet of this boiler, as well as in all other vital heating surfaces, you will find fuel-saving corrugations, like this, which crowd more heating surface into the same space. This feature represents one of the truly great advancements in round boiler design.

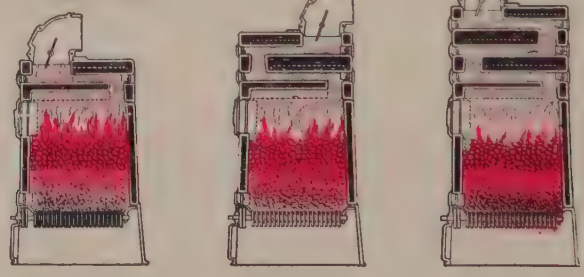
Balanced back-and-forth fire travel

In this round boiler you also find a balanced back-and-forth fire travel. *All* the hot gases, under *all* conditions, must travel through *all* the heating surfaces, before reaching the chimney. No short cuts to the chimney are ever possible. This feature is a final safeguard against chimney waste.

Weil-McLain Round Boilers excel in fuel combustion and heat utilization, as well as in heating efficiency and economy. They give more heat. They fight fuel waste.

For further details write Weil-McLain Company, General Offices: 641 West Lake Street, Chicago, Illinois. Factories and offices: Michigan City, Indiana —Erie, Pa.

Side section views—note fire travel.

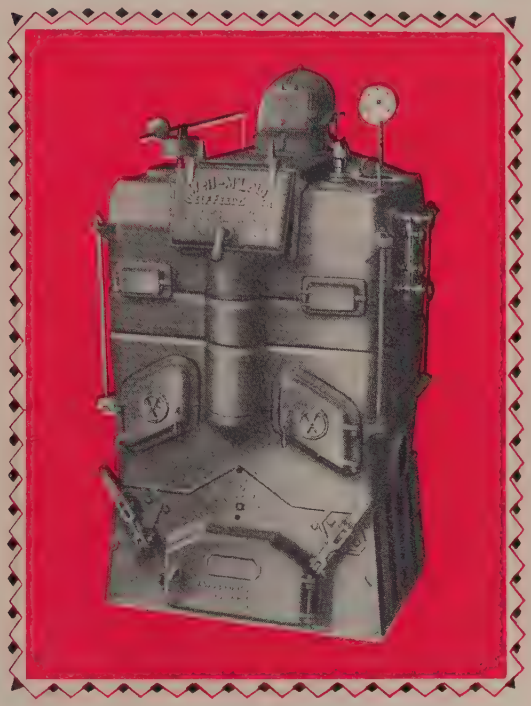


Four section | Five section | Six section

WEIL-McLAIN COMPANY - - - CHICAGO, ILLINOIS

Self-Feed Weil-McLain SCIENTIFIC COMBUSTION BOILERS Type

The highest standard of coal heating



Feeds itself

The fuel in this boiler feeds gradually from a reserve fuel magazine, onto a sloping incandescent fuel bed of uniform depth. Thus the fuel always burns at peak efficiency . . . scientific combustion. Feeds itself until shaking of the ashes is necessary. Eliminates much of the coal shoveling.

Inexpensive sizes of clean hard coal

Because the small sizes of hard coal, which this boiler burns, cost $3 to $7 a ton less than ordinary sizes, this boiler effects annual fuel savings which average from $30 to $70 a year.

A clean basement

Using clean hard coal and having a handy ashpit spray, this boiler assures a clean basement.

Fuel saving corrugations

The Weil-McLain Self-Feed Boiler has more heating surface, due to fuel saving corrugations, like this ~~~~~ in every section. This means efficient utilization of the heat produced by the fire.

Back-and-forth fire travel

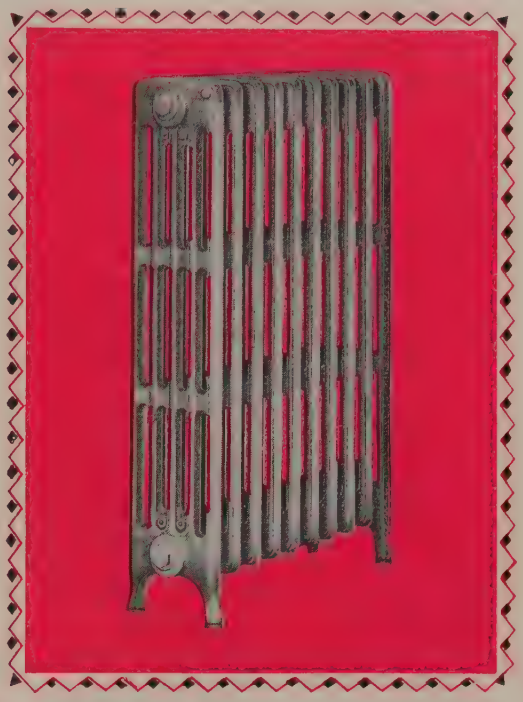
Incorporated in the design of this boiler you will also find a balanced back-and-forth fire travel, which cannot short cut to the chimney under any condition. This is a positive safeguard against waste up the chimney.

Simpler . . . lower in price

The Weil-McLain Self-Feed Boiler has a simple sectional design, which makes its manufacture and installation almost identical with ordinary boilers, and brings its cost within the reach of any home.

CAMEO RADIATORS

A new presentation of radiator beauty



This is a day when everything for the home is purchased with discriminating care and with special regard to beauty and harmony. The new Cameo Radiators, made by Weil-McLain, prove that radiators can be really beautiful and immeasurably more harmonious in their relation to interior decorations.

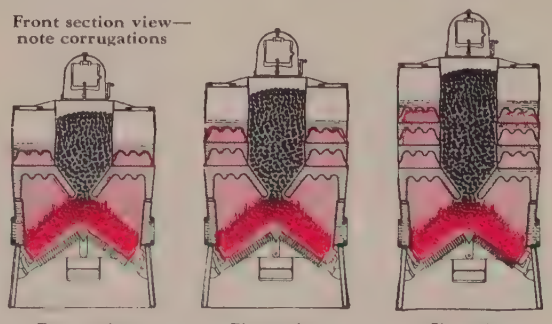
Strength

While the outlines of Cameo Radiators suggest the "cameo" portrait from which they are named, as shown in the cross section above, their design, embodying a scientific combination of four arches, also gives one of the strongest types of construction in which metal can be cast.

Beauty that endures

The instant success of the Cameo Radiator may, therefore, be largely attributed to a very unusual combination of beauty with strength . . . beauty to satisfy the demand for artistic values . . . strength that lends to this beauty the necessary enduring qualities.

For further details write Weil-McLain Company, General offices: 641West Lake Street, Chicago, Illinois. Factories and offices: Michigan City, Indiana—Erie, Pa.



WEIL-McLAIN COMPANY - - - CHICAGO, ILLINOIS

SPENCER HEATER COMPANY

Division of Lycoming Manufacturing Company

Makers of SPENCER HEATERS

WILLIAMSPORT, PA.

NEW YORK, N. Y. | PHILADELPHIA, PA. | ALBANY, N. Y. | SCRANTON, PA. | BUFFALO, N. Y.
BOSTON, MASS. | BALTIMORE, MD. | SYRACUSE, N. Y. | HARRISBURG, PA. | ROCHESTER, N. Y.

Product

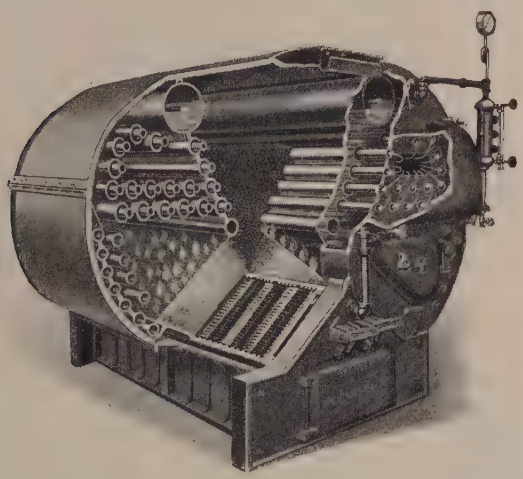
SPENCER MAGAZINE FEED HEATERS.

Spencer Heaters

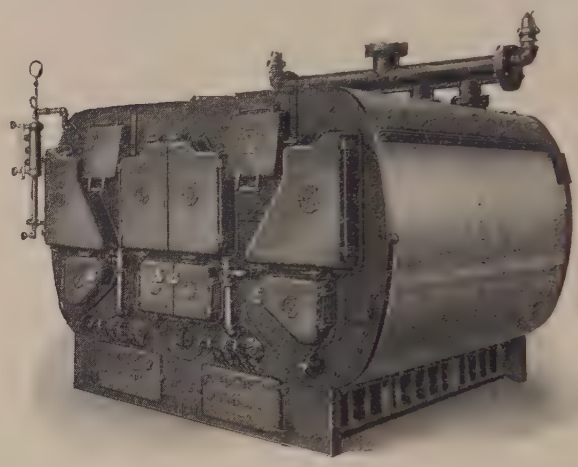
The Spencer Heater is the original magazine feed heater with sloping grates. The water-jacketed magazine holds enough fuel for 12 to 24 hours, without attention. As fuel feeds automatically, as fast or as slow as the fire requires, the magazine supply lasts longer in milder weather.

TRADE-MARK

Spencer Heaters are made in sizes to suit any building, large or small, either in steel tubular types or cast iron sectional types. Commercial ratings have been discontinued. Capacities are guaranteed when installed under normal conditions, according to the table below and on the following page, when used with any low pressure steam, vapor, or hot water system.



50 Series, Spencer Tubular Steam Heater
For large building work—an efficient magazine heater of combination water tube and return tube construction



100 Series, Spencer Tubular Steam Heater
The largest type of Spencer Heater, a four-grate heater for use in multiple story buildings

Sizes and Guaranteed Capacities of Spencer Steel Tubular Heaters

	Heater No.	Direct c. i. column radiation loads,* sq. ft.	Grate area, sq. ft.	Draft required, in. H_2O	Outlets, number and size, in.	Returns, number and size, in.	Size chimney flue, in.——ft.	Smokepipe diam., in.	Over-all dimensions, in.		
									Length	Width	Height
15-21 Series	15	1,600	12.00	.23	2–4	2–2	18x18–50	16	72½	60	63¼
	17	1,950	13.00	.24	2–4	2–2	18x18–55	16	78½	60	63¼
	19	2,300	15.00	.25	2–4	2–2	18x18–60	16	84½	60	63¼
	20	2,650	16.50	.26	2–4	2–2	18x18–65	16	90½	60	63¼
	21	3,000	18.00	.27	2–4	2–2	18x18–65	16	96½	60	63¼
50 Series	3–45	3,600	18.05	.24	2–5	2–2½	18x18–50	18	99½	81¼	71¾
	3–50	4,100	20.24	.25	2–5	2–2½	18x18–55	18	105¾	81¼	71¾
	3–55	4,600	22.56	.26	2–5	2–2½	18x18–60	18	112	81¼	71¾
	3–60	5,100	24.83	.27	2–5	2–2½	20 diam.–65	18	118¼	81¼	71¾
	3–70	5,600	27.00	.28	2–5	2–2½	20 diam.–70	18	124½	81¼	71¾
100 Series	3–80	6,500	30.35	.27	1–8	2–2½	24 diam.–65	22	98	116⅛	100
	3–90	7,600	34.70	.28	1–8	2–2½	24 diam.–65	22	104¼	116⅛	100
	3–105	8,700	39.05	.29	1–8	2–2½	30 diam.–65	22	110½	116⅛	100
	3–120	9,800	43.40	.30	1–8	2–2½	30 diam.–70	22	116¾	116⅛	100
	3–140	10,900	47.75	.32	1–8	2–2½	36 diam.–70	22	123	116⅛	100
	3–160	12,000	52.10	.34	1–8	2–2½	36 diam.–70	22	129¼	116⅛	100

*This includes ample provision for heat loss in covered mains, risers and returns, and for peak loads.
Heaters No. 3-45 to 3-160 are furnished with steel jackets and 1½-in. Rockwood asbestos covering, also pipe header.
Heaters No. 15-21 are furnished with steel jackets only.
Chimney flue sizes are based on a maximum flue temperature at boiler smoke outlet of 500° F.

SPENCER HEATER COMPANY, Williamsport, Pa.

Special Features for Different Types of Buildings

Spencer Heaters are especially efficient in industrial buildings, greenhouses and garages where uniform heat is desirable; and in churches, theaters, schools and buildings where they give constant, even and uniform heat, without the attention of a night fireman.

For the home, the Spencer is especially convenient, as it needs attention only once or twice in 24 hours.

Spencer Economy for Building Owners

Though Spencer Heaters are designed to burn any non-coking graded fuel, their greatest saving is made with small sized, low cost fuels. They save as much as half the owner's annual fuel bill by using No. 1 buckwheat anthracite, and proportionately by using by-product pea coke. Where anthracite and coke are not available, they are equally efficient when fired with smaller sizes of semi-bituminous coal, such as Pocahontas, or any non-coking graded fuel.

Automatic Magazine Feed Gives Steady Heat

Fuel is fed automatically by gravity—no blowers or mechanical apparatus is needed. They are easy to install—the new Spencer Heaters are as easy to erect as any other sectional heater on the market—and there is nothing to get out of order.

Write for complete descriptions and illustrations of all Spencer Heaters.

L-1 Type, Spencer Sectional Heater
A magazine heater for steam, vapor or hot water systems in 6 to 12-room dwellings or industrial buildings of moderate size

L-2 Type, Spencer Sectional Heater
A magazine heater for large dwellings, industrial buildings and institutional buildings

Sizes and Guaranteed Capacities of Spencer Cast Iron Sectional Heaters

	Heater No.	Direct c. i. column radiation loads, sq. ft.*		Grate area, sq. ft.	Draft required, in. H_2O	Outlets, number and size, in.	Returns, number and size, in.	Size chimney flue in.——ft.	Smoke pipe diam., in.	Over-all dimensions, in.		
		Steam	Water							Length	Width	Height
L-1 Type	L 104	270	445	1.88	.12	1–4	2–4	8x 8x35	10	32	32	57
	L 105	390	645	2.60	.12	1–4	2–4	8x 8x35	10	39	32	57
	L 106	510	845	3.33	.12	2–4	2–4	8x 8x35	10	46	32	57
	L 107	630	1045	4.07	.12	2–4	2–4	8x12x35	10	53	32	57
	L 108	750	1245	4.80	.12	2–4	2–4	8x12x35	10	60	32	57
L-2 Type	L 205	550	910	3.63	.12	1–4	2–4	8x12x35	10	39	40	60
	L 206	725	1200	4.66	.12	2–4	2–4	8x12x35	10	46	40	60
	L 207	900	1490	5.68	.12	2–4	2–4	8x12x40	10	53	40	60
	L 208	1075	1780	6.70	.12	2–4	2–4	12x12x40	10	60	40	60
	L 209	1250	2070	7.73	.12	2–4	2–4	12x12x40	10	67	40	60
S-2 Type	S 2–7	1060	1700	6.77	.18	2–4		12x12x40	12	74 7/8	57 3/8	62 11/16
	S 2–8	1300	2080	7.90	.19	2–4		12x12x40	12	81 1/8	57 3/8	62 11/16
	S 2–9	1540	2460	9.03	.20	2–4		12x12x40	12	87 3/8	57 3/8	62 11/16
	S 2–10	1780	2840	10.16	.21	2–4		12x18x45	12	93 5/8	57 3/8	62 11/16
	S 2–11	2020	3220	11.29	.21	2–4		12x18x45	12	99 7/8	57 3/8	62 11/16

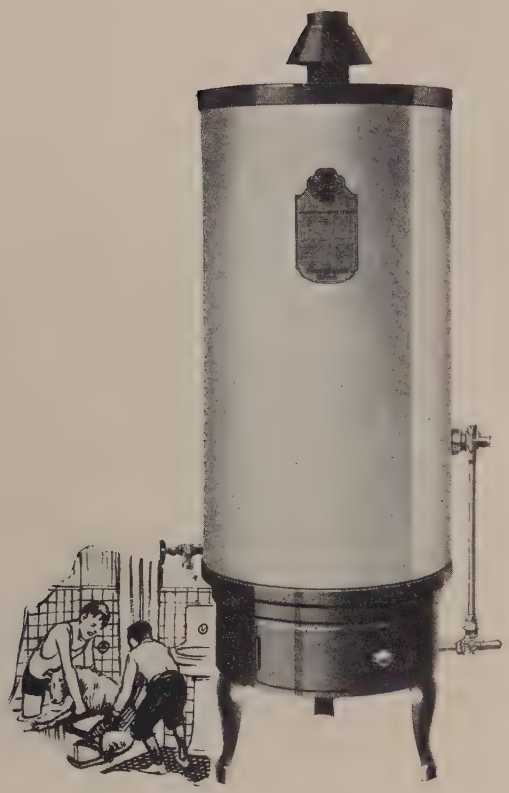
*This includes ample provision for heat loss in covered mains, risers and returns, and for peak loads.

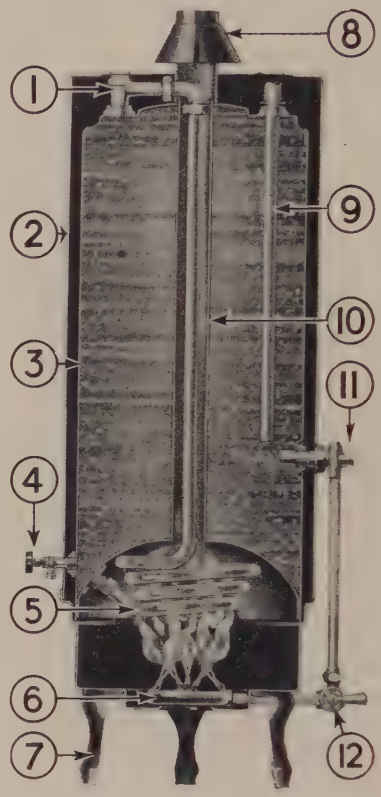
SPENCER HEATER COMPANY, Williamsport, Pa.

HOTCOIL

Automatic Gas Water Heaters

Other Products: Boilers and Radiators see pages 262-267
Valves and Fittings see page 259
Heaters see page 246





Instant Hot Water

The conveniences of the modern American home are the envy of the world. And outstanding among these comforts is hot water instantly available for every purpose.

The efficiency of the Hotcoil Gas Water Heater has reduced the cost of this great comfort to only a few cents a day. For, as you can see in the cross-section view, this water heater is ingeniously designed to conserve fuel. The solid copper coil, the water-surrounded flue, the air-space insulation of the tank and the automatic gas burner regulator combine to give the greatest practical economy.

The Hotcoil comes in 20, 30 and 40 gallon sizes to fit every need. It is built sturdily to give long years of inestimable enjoyment and comfort. Nevertheless, it is the lowest priced automatic gas water heater of its type on the market.

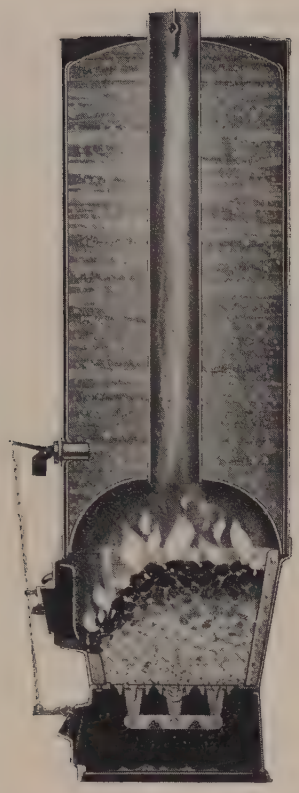
SPECIFICATIONS

1. Special brass flow-fitting.
2. Indestructible, metal, insulating jacket with pearl-grey baked-enamel finish.
3. Substantial heavy-gauge tank, galvanized inside and outside.
4. Conveniently located brass drain cock.
5. Large-bore, heavy-gauge, one-piece copper coil heating element, insuring immediate hot water recovery.
6. Bunsen-type gas burner with self pilot.
7. Substantial base and legs finished in porcelain enamel.
8. Porcelain enamel back draft diverter.
9. Non-syphon-acting intake.
10. Central water-surrounded flue containing copper coil heating element.
11. New Arco automatic regulator with quick acting metallic bellows.
12. Main gas supply control valve.

Products of AMERICAN RADIATOR COMPANY

KOLFLASH WATER HEATERS

Automatic Coal-Burning



Costs But a Few Cents a Day

The increasing popularity of the suburban home has created a demand for an automatic water heater for use in communities beyond the gas mains and where gas is not available.

The new Kolflash Water Heater is specially designed to fit this need. It provides all the hot water comfort of a Park Avenue apartment at almost negligible cost. It burns coal and is so designed that a thermostat regulates the drafts to keep the water constantly hot without waste of fuel and with minimum attention.

It is the only completely automatic coal-burning water heater of its type on the market. It comes in 30, 40, 60 and 80 gallon sizes. The larger models are especially suited for restaurants, beauty parlors, barber shops and other uses which require large quantities of hot water at lowest cost.

SPECIFICATIONS

1. One-inch, non-heat-conducting refractory lining in firepot. Prevents radiation heat loss and provides for quick pick-up heating capacity.
2. Water-surrounded flue. Insures continuous extraction of heat from the hot gases of combustion.
3. Automatic regulation, precise and reliable.
4. Indestructible metal insulating jacket with beautiful pearl-grey baked-enamel finish.
5. Firepot, base, and top finished in beautiful porcelain-enamel.

Made in 20, 40, 60, and 80 gallon sizes
Burn hard or soft coal

40 WEST 40th STREET, NEW YORK CITY

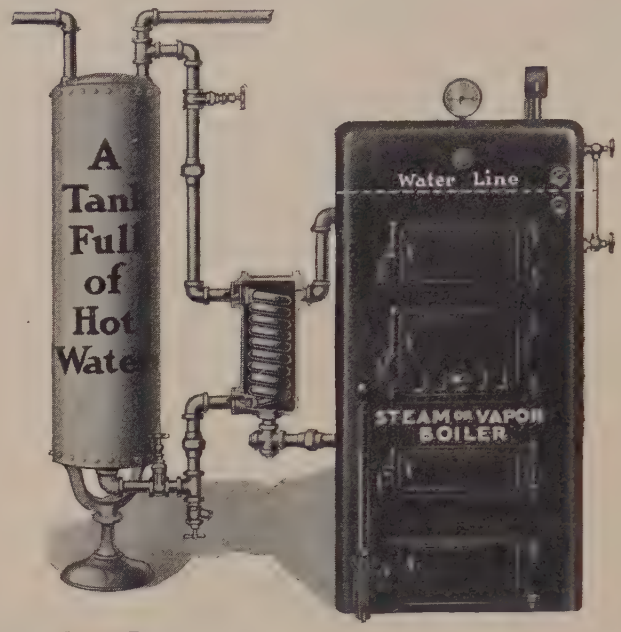
Hot Water . . . for Least Possible Cost

Excelso Water Heaters provide a constant and uniform supply of domestic hot water at lowest possible cost in homes, apartments, hotels, office and mercantile buildings. By using the fire that warms the home or building they save the care and cost of separate fuel and fire. They eliminate the inefficient and troublesome fire-pot coil. They connect with the regular piping and storage tank system. Any plumber or steamfitter can install easily and quickly. They are self-operating, requiring absolutely no attention.

Several Types and Sizes

Excelso *Indirect* Water Heaters operate on the outside of steam or vapor boilers—round, sectional or tubular steel types. Three styles: Single Copper Coil, Double Copper Coil, Triple Copper Coil. Capacities: 30 to 1000 gal. (or more when connected in batteries of two or more).

Excelso *Direct* Water Heaters are made in three styles and a number of sizes. They operate in connection with hot water boilers or hot air furnaces. Being compact and above the fire level they do away with the troublesome fire-pot coil. The several styles are: Excelso Fire-pot Generator, Excelso Phaeton Heater, Excelso Fin-Pin Heater. Several sizes each. Capacities 30 to 250 gal.



Sold and Installed by All Plumbers and Steamfitters

EXCELSO WATER HEATERS

Nationally Distributed by Leading Wholesalers and Boiler and Radiator Manufacturers

Excelso Indirect Heaters connect outside, between the steam or vapor boiler and the hot water storage tank; below the water line so that the boiling water from the heating boiler flows down through the Excelso, indirectly heating the domestic supply which circulates up through the copper coil.

The copper coil heating elements, removable, are fitted into the cast iron shell by means of patented ground joint brass connections—all parts interchangeable. Not a drop of heated water comes in contact with the cast iron. There is no substitute for Excelso.

Excelso Single Coil Indirect Heater

This is the popular style for homes and small buildings. Made in six sizes, from 30 to 120 gal. capacity.

DIMENSIONS

Size	Jr.	11	12	13	14	15
Length, in	8½	10½	14	11½	15	19½
Diameter, in	5	5	5	6½	6½	6½
Shell Openings, in.	1	1	1	1½	1½	1½
Coil Openings, in.	¾	¾	¾	1	1	1
Weight, Crated, lb.	11	17	23	31	39	46

Excelso Double Coil

The heavy duty Double Coil Heater is for larger installations such as apartment houses, medium size hospitals, business blocks, etc. Capacities 160 to 400 gals.

DIMENSIONS

Size	25	26	27	28
Length, in	12½	15	19	23¼
Diameter, in	9	9	9	9
Shell Openings, in.	2	2	2	2
Coil Openings, in.	1½	1½	1½	1½
Weight, Crated, lb	58	68	82	95

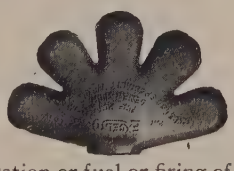
Excelso Triple Coil

Designed for still larger installations such as laundries, hotels and apartments. Also used in heating radiation. Capacities from 600 to 1000 gals.

DIMENSIONS

Size	35	36	37
Length, in	21	25	29
Diameter, in	13¾	13¾	13¾
Shell Openings, in.	3	3	3
Coil Openings, in	2½	2½	2½
Weight, Crated, lb	185	210	240

Excelso Fire Pot Generator

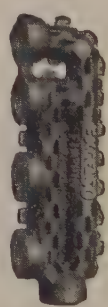


Installed above the fire level in hot water boilers and hot air furnaces, the Excelso Fire Pot Generator does not interfere with combustion or fuel or firing of boiler. Gives maximum heating surface. Does away with the troublesome fire-pot pipe coil. Made in cast iron or brass in two sizes; No. 1, up to 40 gals.; No. 2, over 40 gal. capacity.

Excelso Phaeton Heater

Used to heat the domestic water supply, to heat auxiliary radiators or do both. They are placed in the furnace or hot water boiler, above and out of the way of the fire. Side and top and bottom tappings come with each size. Cast iron or brass; capacities from 30 to 250 gals.

Excelso Fin-Pin Heater



Made in 2 sizes, either brass or iron—especially for use in the fire pots of Hot Water Boilers, Warm Air Furnaces and Arcola Type Heaters.

No. 30—30 Gal. Cap.
No. 40—40-Gal. Cap.

Catalog diagraming fourteen typical tested installations sent on request

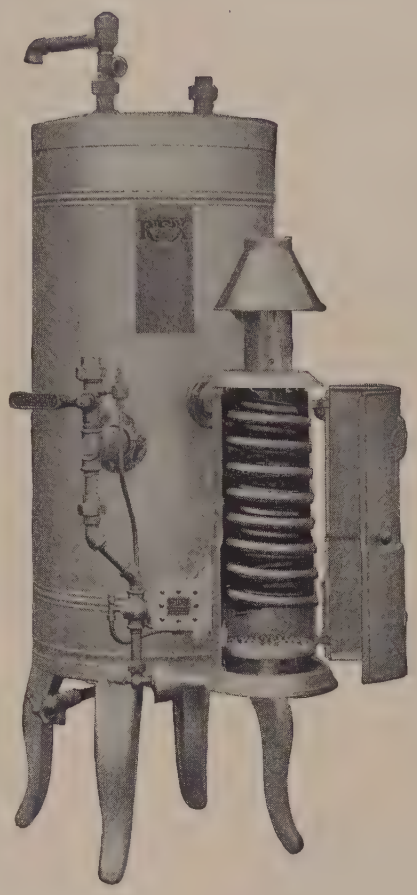
Excelso Products Corporation
DIVISION OF AMERICAN RADIATOR COMPANY

Branches in all Principal Cities
83 Clyde Ave., Buffalo, N. Y.

REX AUTOMATIC STORAGE WATER HEATER

Manufactured by THE CLEVELAND HEATER CO.

1900 West 112th St., Cleveland, Ohio



Designed on the principles of the circulating or side arm type water heaters.

Numbering System—Every Rex Automatic Storage Water Heater has a double number (viz. 24-53). The number preceding the hyphen indicates the capacity of the storage tank in gallons; the number following the hyphen the size and type of heating element. Thus: Rex No. 24-53 has a 24-gal. storage tank and number 53 heater.

Storage Tank—The galvanized storage tank is constructed of extra heavy copper bearing steel. The tank is covered with a blanket of hair felt, and incased with 24 gauge sheet metal.

Copper Storage tank, complying with Massachusetts Code, of 250, 300 and 350 lb. hydrostatic pressure can be had in lieu of galvanized steel storage tanks.

Heating Element—The cast iron jacket is of improved design. The burner is bunsen-type, one-piece design, ports are raised and drilled. (Gauzed burners furnished upon request.) The heating element is a copper coil. There are four sizes, as follows:

No. 53: double copper coils, ¾ in.; 18 gauge; length 20 ft. 2 in. Burner approved by Testing Laboratory of the A. G. A. to pass 25,000 B. t. u. per hour.

No. 73: double copper coils, ¾ in.; 18 gauge; length 23 ft. Burner approved by Testing Laboratory of the A. G. A. to pass 25,000 B. t. u. per hour.

No. 92: triple copper coils, ⅞ and ¾ in.; 18 gauge; length 37 ft. 8 in. Burner approved by Testing Laboratory of the A. G. A. to pass 45,000 B.t.u. per hour.

No. 170: hard water heater, double copper coils, outside coil diameter 1¼ in., inside coil, diameter 1⅛ in. Burner approved by Testing Laboratory of the A. G. A. to pass 45,000 B.t.u. per hour. The manufacturer recommends to cut burner capacity to 25,000 B.t.u. per hour if heater is used where hard water prevails.

Thermostat—A Rex snap-action thermostat is used on all Rex Automatic Storage Water Heaters. Bellows-type principle. Adjustable.

Gas Safety Control—All Rex Automatic Storage Water Heaters are Patrol valve equipped. An assurance of safety should the pilot light go out. The Patrol valve is a thermostatic, safety, pilot light controlled valve, which only can open when the pilot light is burning. The flame that lights the burner is the flame that operates the Patrol valve.

Relief Valve—Patrol relief valves are standard equipment of all Rex Automatic Storage Water Heaters. Combination temperature relief valve and pressure relief valve. Set at factory to relieve when temperature exceeds 220° or pressure exceeds 140 lb.

Draft Hood—An all-aluminum down-draft diverter is furnished with all Rex Automatic Storage Water Heaters.

Other Features—Brass union water connection, ¾ in. on all sizes. Copper dip pipe. Extra large brass circulators.

Gas line has trap to catch foreign material that may be carried along with gas. Adjusting valves for main burner, main pilot and Patrol valve pilot are needle valves. (If preferred Rex Automatic Storage Water Heaters can be equipped with air cocks in pilot lines and fixed orifice for main burner—if so wanted, specify calorific value (B.t.u.), specific gravity and pressure of gas.)

Approvals—Rex Automatic Storage Water Heaters are approved by the Testing Laboratory of the American Gas Association, the Good Housekeeping Institute, and the Delineator Home Institute.

Sizes

20-Gallon Size—Made with copper tanks only. For the small home. Will furnish sufficient hot water to accommodate two to three persons.

24-Gallon Size—A popular size recommended for the small home or apartment with one bath. Storage Tank holds sufficient to accommodate up to four persons.

32-Gallon Size—A standard size for the modern home with bathroom, kitchen, and laundry, and will supply the average household with all the hot water needed.

42-Gallon Size—Recommended for homes with one bath and shower or two baths and no shower, and kitchen. It can be used in two-apartment buildings.

66-Gallon Size—Built for homes having two or three baths, kitchen and laundry. It is also intended to meet demand of apartment buildings of not more than four small suites, restaurants, gymnasiums, garages and small hotels.

100-Gallon Size—Designed for apartment houses of six suites of four rooms and bath or four suites with bath and shower; also recommended for restaurants, schools, gymnasiums, hotels, and industrial purposes.

Engineering Service and Catalogues

Our Engineering Department is ready to assist you in selecting a proper size and type. When writing them specify the type of home or industry, the average daily load, maximum hour load, number of maximum hours and temperature required.

Send for catalogues and engineering data on other Rex products that may be of interest to you.

THE CLEVELAND HEATER CO., 1900 W. 112th St., Cleveland, Ohio

Economy and Peerless Gas Water Heaters

Manufactured by ECONOMY HEATER COMPANY

105 West Monroe Street, Chicago

Chicago Plant, 2491 South Robey Street — Portsmouth Plant, Portsmouth, Ohio

Products

Storage Gas Heating Range Boilers with and without automatic thermostatic control. Also Galvanized Steel Range Boilers.

Two Prominent Brands

We own the patents and all trade rights covering the "Economy Automatic Storage Gas Water Heater" and the "Celebrated Peerless Kitchen Boiler" (combined Gas Water Heater and Range Boiler), both of which have enjoyed national distribution for over 15 years.

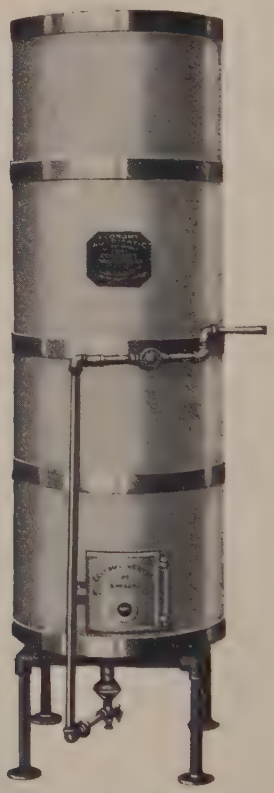
The Economy Automatic Storage Gas Water Heater

ECONOMY AUTOMATIC
Without Insulation, as Regularly Furnished

This piece of equipment renders the best form of instant and continuous domestic hot water service with gas as the fuel. It requires no attention, being entirely self-operating. It is extremely efficient and, therefore, very economical on gas. It can be connected with coil in heating plant if desired so that during the winter months the use of gas for hot water can be avoided. It is the most practical and sensible selection for any large residence, two-flat or three-story apartment building, store, factory and indeed wherever a constant and ample supply of hot water is required. Made in sizes up to nominal 120 gallons storage capacity.

Insulation

The Economy Automatic Storage Gas Water Heater does not require insulation. It is a complete, self-contained, built-in gas heating boiler in and of itself and, while we manufacture insulating coverings for all sizes, we do not claim that any fuel saving of consequence will be obtained through use of insulation except in sizes numbers 52 to 120. Usually Economy Automatics are installed without insulation.



ECONOMY AUTOMATIC
With Specially Designed Insulation to Be Applied on Job After Installation

ECONOMY HEATER CO., 105 West Monroe Street, Chicago

These prices are net contracting plumbers' costs f.o.b. Chicago or Portsmouth, Ohio:

Number	SIZE		Shipping Weight Lbs.	Actual Holding Capacity Gallons	Price Each
	Diameter Inches	Height Feet			
18	12	3	115	13	$ 46.00
24	12	4	135	17	47.00
30	12	5	155	21	48.00
32	14	4	165	23	51.00
40	14	5	175	30	54.50
42	16	4	180	32	57.00
52	16	5	195	41	67.20
55	18	4	205	43	69.60
66	18	5	235	53	81.60
69	20	4	245	55	84.00
82	20	5	255	65	96.00
100	22	5	300	78	117.60
120	24	5	365	94	129.60

Above prices are for "Economy Automatics" complete with positive thermovalve control but without stand or insulated covering. Stands extra on all sizes. Regular range boiler stands can be used. For sizes 16 inches in diameter and larger we recommend the use of pipe stands as shown in illustrations. We furnish pipe stands only when ordered at price of $4.00 each. F.o.b. Chicago or Portsmouth, Ohio.

Specially Designed Insulation for "Economy Automatics" Packed One Complete Set to Case

These prices are net contracting plumbers' costs f.o.b. Chicago or Portsmouth, Ohio:

The Economy Automatic without insulation is the most efficient gas water heater on the market, but if covering is wanted our six-ply "CAROCEL" formed insulation is available and can be applied in a few moments' time after installation.

Size	Each
18	$ 7.20
24	8.40
30	9.60
32	9.60
40	10.80
42	10.80
52	13.20
55	13.20
66	15.60
69	15.60
82	16.80
100	19.20
120	21.60

The "Celebrated Peerless Kitchen Boiler" (Combined Gas Water Heater and Range Boiler)

The "Peerless" is the gas heating boiler which established this type of domestic hot water equipment. The "Peerless" was specified and thousands of them were installed in 1918 by the United States Housing Corporation. Builders who adopt the "Peerless" make it serve as an added feature—something which helps them make the sale or secure the tenant.

Don't Take a Substitute—Insist Upon Having the Genuine "Peerless"

We make the "Peerless" in all sizes from No. 18 up to No. 52. And we urge every builder of homes in the United States to find out for himself from actual trial of one just how good the "Peerless" is and how advantageous it will be for him to adopt the "Peerless" and stop using plain range boilers with side gas heaters.

These prices are net contracting plumbers' costs f.o.b. Chicago or Portsmouth, Ohio, for the celebrated Peerless Kitchen Boiler:

Number	SIZE		Price Each
	Diameter Inches	Height Feet	
18	12	3	$17.00
24	12	4	18.00
30	12	5	19.00
32	14	4	19.00
40	14	5	30.00
42	16	4	33.00
52	16	5	43.00

STANDS EXTRA

Use Range Boiler Stands or we will furnish set of 3 legs as shown in illustration at price of $1.00 per set.

ECONOMY HEATER CO., 105 West Monroe Street, Chicago

RUUD Automatic Gas Water Heaters

"A Quality Line Since '89"

The first RUUD Automatic Water Heater was built in 1889, forty years ago. Ever since, RUUD has been a name known for high quality of design and manufacture; it is indorsed by enthusiastic owners in every part of the world.

Modern. Modern homes demand RUUD Automatic Hot Water Service. Cleanliness and health demand a plentiful supply of gas-heated water . . ready in the modern way . . instantly and automatically.

Perfect Hot Water Service. RUUD Hot Water Service is perfect service. It requires no thought or attention. Stair-climbing and hand-regulation are eliminated. Cold water running from "hot" faucets becomes a thing of the past. Cold baths, cold dishwater, delayed laundering and all other annoyances arising from lack of hot water are happily banished by RUUD and forgotten.

Your hand at the faucet controls the RUUD—simply this and nothing more. Morning, noon and night, hot water is constantly ready, flowing instantly without wait or worry.

Types. RUUD is made in two general types, the continuous flow (instantaneous) and automatic storage. Each may be had in many sizes and prices. Both, under like operating conditions, are practically the same in efficiency and fuel costs.

Operation. The continuous flow model is a direct heating unit automatically operated by each turn of the faucet. Hot water continues to flow as long as the faucet is held open.

The automatic storage model heats and stores water in a heavily insulated tank where a generous supply is kept hot and ready. Action is automatic. Thermostatic regulation replenishes the supply quickly when hot water is withdrawn.

Builders. Builders everywhere recognize RUUD quality and recommend it. They know it to be a vital factor in satisfied ownership and a long-lived monument to good building judgment.

QUALITY FEATURES

(Continuous Flow Models)

RUUD Dual Fuel Control... two separate and independent gas valves...Heavy gauge coils of premium copper...lower coil detachable for easy cleaning ...two piece bunsen burners with brass flame check...heavy cast iron shell with dead air space insulation...rugged, long-lived construction throughout.

RUUD

World Pioneer and World Leader

Complete Information—Specific descriptions of RUUD Gas Water Heaters and answers to questions or recommendations may be quickly had by writing the main office Pittsburgh, Pa. In larger cities consult the telephone directory for address of local RUUD branch.

QUALITY FEATURES

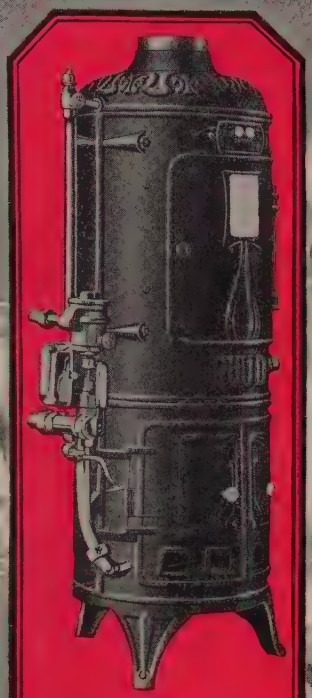
(Automatic Storage Models)

RUUD Moment Valve Gas Control...RUUD Automatic Gas Cut-off Pilot Control... replaceable tank...thick insulation...bunsen burner...lead-coated flue way...quickly-removable combustion chamber assembly...handsome finish of ivory and terra cotta porcelain enamel...All fittings of brass and copper...rugged, long-lived construction throughout.

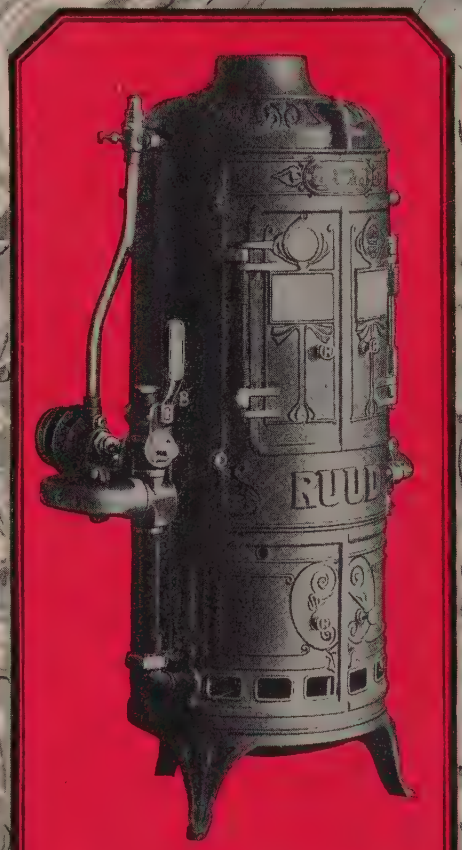
RUUD MANUFACTURING COMPANY, Pittsburgh, Pa.

RUUD Automatic Gas Water Heaters

"A Quality Line Since '89"



RUUD ROYAL BLUE, low-priced continuous flow model for small homes. Particularly adapted to the south and southwest.



RUUD Continuous Flow Models, provide instant and inexhaustible hot water. Sizes for residences in three four, six and eight gallon capacities.

RUUD AUTOHOT—an automatic storage water heater. Made in three sizes—No. 20, 30, 45 (20, 30 and 45 gallon capacity respectively). With galvanized iron or everlasting copper tanks. For homes with one or more bathrooms. Beautifully finished in ivory and porcelain enamel.

Buy once—
Buy wisely—
Buy RUUD

RUUD MANUFACTURING COMPANY, Pittsburgh, Pa.

Richardson Hot Water Supply Boilers

Manufactured by RICHARDSON & BOYNTON CO.

"Heating and Cooking Apparatus Since 1837"

Executive Offices: 260 Fifth Ave., NEW YORK CITY

For Branch Offices See Page 248

Other Products

Warm Air and Pipeless Heaters, see pages 248–249.
Round and Sectional Boilers, see pages 274 to 276.
Coal and Combination Coal & Gas Ranges, see page 412.

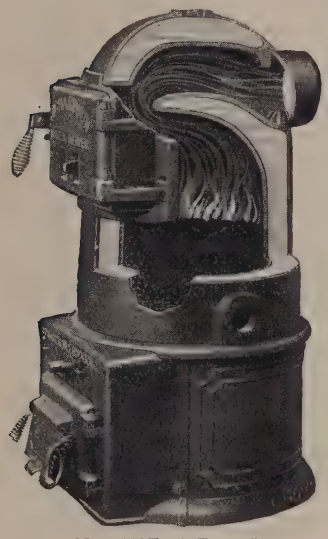
Richardson Galvoxide Process Guarantees Clean Hot Water:

In many sections of the country the chemical composition of the water makes it impossible to obtain clean hot water, free from rust or discoloration, except by using brass sections in tank and laundry heaters.

Richardson & Boynton Company five years ago perfected a new type of hot water supply boiler with a galvoxide water section, treated by a special process so that it is not affected by the chemical properties in the water in any way. Clean hot water is available at all times.

Thousands of successful installations during the past five years have so established the Richardson Galvoxide boilers as a solution for the clean water problem that it is guaranteed to keep the water free from rust or discoloration.

Builders, architects and plumbers everywhere have found the guaranteed Galvoxide Water Section so thoroughly satisfactory in every way that they unreservedly recommend it to their clients.



Nos. 110T-112T-114T

Nos. 170-200-300

Domestic Hot Water Supply Boilers, Fitted with Triangular Grates. Can be furnished with grates for pea coal. Furnished with cast iron or galvoxide water section.

Size	Capacity in Gallons of Water	Capacity in Sq. Ft. of Radiation	Dia. of Grates, Inches	Tappings, Flow and Return, Inches	Smoke Pipe	Height, Inches
110T	150	115	10	1½	6	34
112T	250	200	12	2	6	36⅜
114T	350	280	14	2½	6	37⅞
170	475	380	17	2–2½	7	42
200	600	480	20	2–3	8	43¼
230	800	600	23	2–3	9	48¾

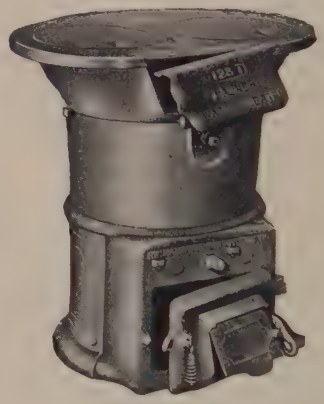
No. 4 Union

Height, 27½ inches.
Top, 21x14¼ inches.
Capacity, 50 gallons.
Smoke-pipe, 6 inches.

1-inch flow and return tappings. Fitted with high ash pit and "Perfect" revolving grate bars. Can be furnished with Cast Iron or Galvoxide Water Section. The No. 4 Union has a course of fire brick under water section which prevents ashes and dead coal from coming in contact with heating surface insuring maximum efficiency.

No. 123-T

Height, 23 inches.
Top, 24x16 inches.
Capacity, 80 gallons.
Grate, 10½ inches.
Smoke-pipe, 4½ inches.



1 inch flow and return tappings.

Fitted with high ash pit and "Perfect" revolving grate bars.

Can be furnished with Cast Iron or Galvoxide Water Section.

A larger size—No. 124-T has a capacity of 150 gallons and is 26 inches high.

No. 411

This is a hard or soft coal supply boiler, with a capacity of 100 gallons.

Radiation, 50 feet.
Height over all, 27 inches.
Grate, 10 inches.
Depth of fire, 10 inches.
Smoke Pipe, 5 inches.
Tappings, 1¼ inches.
Floor space, 18 in. x 18 in.
Fire door, 6 in. x 4½ in.

RICHARDSON & BOYNTON CO., New York City-Utica, N. Y.

CELOTEX
BRAND
INSULATING CANE BOARD

FOR INTERIOR FINISH

THE pleasing texture of Celotex Insulating Cane Board and its natural tan color make it unusually adaptable to modern styles of architecture for interior finish and decoration. Many beautiful effects may be had by staining, painting or stenciling Celotex. In addition to providing this unusual beauty at low cost, Celotex adds the advantages of economical insulation and sound deadening.

MATERIAL TO USE

For interior finish Celotex Standard Building Board shall be used. In some cases Celotex Lath may be used to produce certain effects.

Framing. Studs, joists and rafters shall be framed to conform to the design of board spacing or paneling design, spacing studs, joists or rafters not more than 16″ o.c., and using extra studs, joists, rafters and headers if necessary. For the most substantial construction headers shall be provided back of chair rail and other heavy mouldings. For interior finish a true, even framing surface is imperative for satisfactory results; therefore use select straight framing members.

Application of Celotex. Apply Celotex in the regular manner, nailing to the intermediate framing members first, spacing nails 3″ apart, then nail around all edges spacing nails 3″ apart and ⅜″ away from the edge. Leave 3/16″ space between all boards.

If joints are to be covered use standard galvanized roofing nails 1½″ long with ⅜″ heads around all edges to be covered and 5d finishing nails, driven at an angle, for nailing all exposed surfaces of the Celotex.

If joints are not covered use 5d finishing nails throughout, driven at an angle, spacing all nails 3″ apart. Counter sink all finishing nail heads.

Bevel joint. Beveled joints may be had by means of sanding or cutting with a sharp knife or fine toothed saw.

Celotex provides an ideal surface for Interior Finish.

Celotex Ashlar Stone Treatment

PAINTING AND DECORATING

Celotex as interior finish may be left natural or it may be painted or stained to suit. Any paint may be used or paint effect produced.

Sizing. To secure maximum coverage, when oil paint is used, the surface of Celotex must be sized or primed.

With stains, no sizing is necessary.

Glue Sizing. Dissolve 1½ pounds of shell or chip glue in 1 gallon of boiling water and apply warm. Use no size that has been mixed over eight hours.

STAINING

Oil or Spirit Stains. Any commercial stains used for dyeing wood may be used over Celotex. Applied according to the Manufacturer's Specifications, as for wood.

Water Stains. Water stains are mixed and applied according to the Manufacturer's Specifications.

A satisfactory stain for Celotex is made by mixing stains with glue sizing or paste in accordance with the Manufacturer's Specifications. Any color or tint may be produced. Due to the slow drying qualities of a paste colored with water stain, other tints may be mottled into them after they have been applied to the Celotex, thereby producing Tiffany or antique effects. Any stencil effect can be applied over glue size or paste water stains in Fresco or Japan colors.

KALSOMINING

Kalsomine may be applied over either sized or unsized Celotex surfaces. When sizing is not used, add small amount of glue to mixture. Mix and apply according to the Manufacturer's Specifications.

ASHLAR STONE EFFECT

The texture of Celotex has made it a unique material for interior decoration cut into Ashlar Stone pattern, as shown in illustration. Celotex Ashlar Stone is generally left unsanded so that the surface has the regular Celotex texture. Sometimes it is painted with lead and oil or treated with plastic paint. For details pertaining to the application of Celotex Ashlar Stone Design, write for Technical Note Number 19.

Note: Many other beautiful decorative effects may be had over Celotex. Here are a few.

Wall Paper
Sanitas, Wall Canvas, etc.
Plastic Paints
Various tile effects
Wood panel effects

For specific information on various methods of treating Celotex for interior finish, write to

The Celotex Company,
645 N. Michigan Ave., Chicago, Ill.

THE CELOTEX COMPANY, 645 N. Michigan Ave., Chicago, Ill.

PANELSTONE—*The Carpenter's Tile*

Made by CHICAGO PANELSTONE COMPANY

2456 West George Street, Chicago, Illinois

PANELSTONE is the building carpenter's tile. Its installation is a carpenter's job. All that is necessary to install Panelstone is a saw, a hammer and some nails. With these, any carpenter can install a bathroom, kitchen, breakfast nook or basement room that will equal ceramic tile in beauty, permanence and effectiveness. Remodeling is just as simple as new installations, for Panelstone is perfectly adapted for applying over old walls.

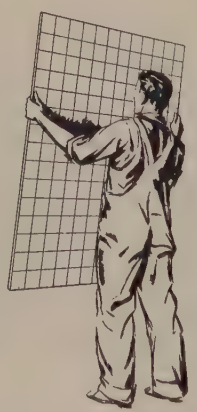
It Will Increase Your Business and Your Profits

With increasing frequency you will figure on work—either a new building, or remodeling—where tile walls in bathroom and kitchen are wanted. Ordinarily, you must share your profits. *Now you can keep them all.* For the beauty and durability of Panelstone Tile completely satisfies the demand for tiled walls. And you can easily install it yourself.

Ease of Handling

Panelstone Tile is made by applying the colored tile design to panels of especially prepared gypsum base. These panels, four by five feet in dimension and 3/8" thick, are cut with a saw to fit the requirements of any room, and then permanently attached to the plaster board or wood lath backing with a special Panelstone Cement and concealed nails. Any carpenter can install Panelstone Tiled walls easily, quickly and perfectly. It will not dull the saw.

For Full Details and Literature, Write to—



Observe the rigid, sturdy, easily-handled slab of Panelstone. A 4 by 5 foot sheet weighs approximately 40 pounds.

The Beauty of Glazed Tile at Less Than Half the Cost

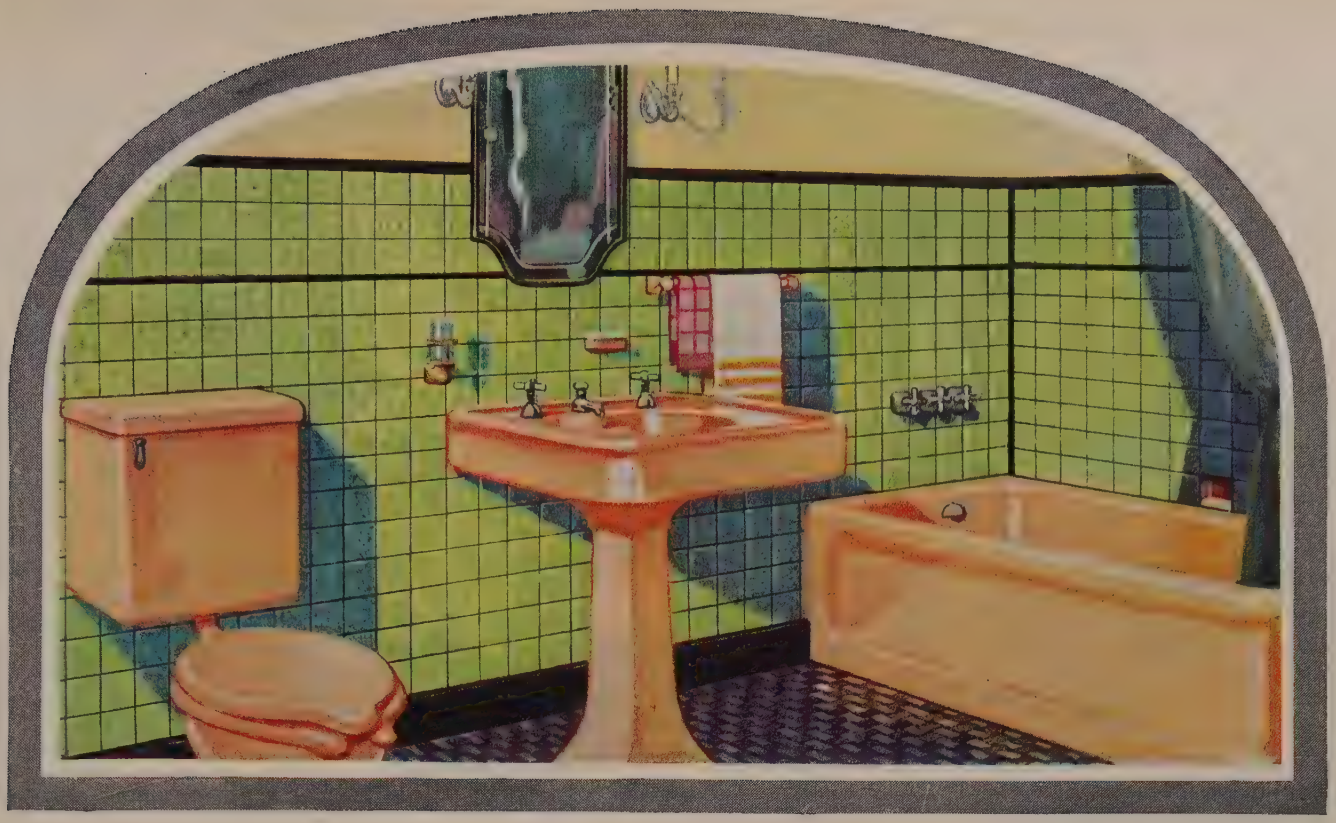
Doubtless many of your customers would specify tiled walls in the kitchen and bath, except for the high cost. Now you can offer them Panelstone Tile—with all the beauty and permanence of ceramic tile, at less than half the cost. Panelstone opens up new profit possibilities, for it makes an artist of the building contractor. It is completely decorated—no further attention necessary. Panelstone sells itself. In most cases, all you need do is show it, and the added profits are yours.

An Ever-Increasing Market

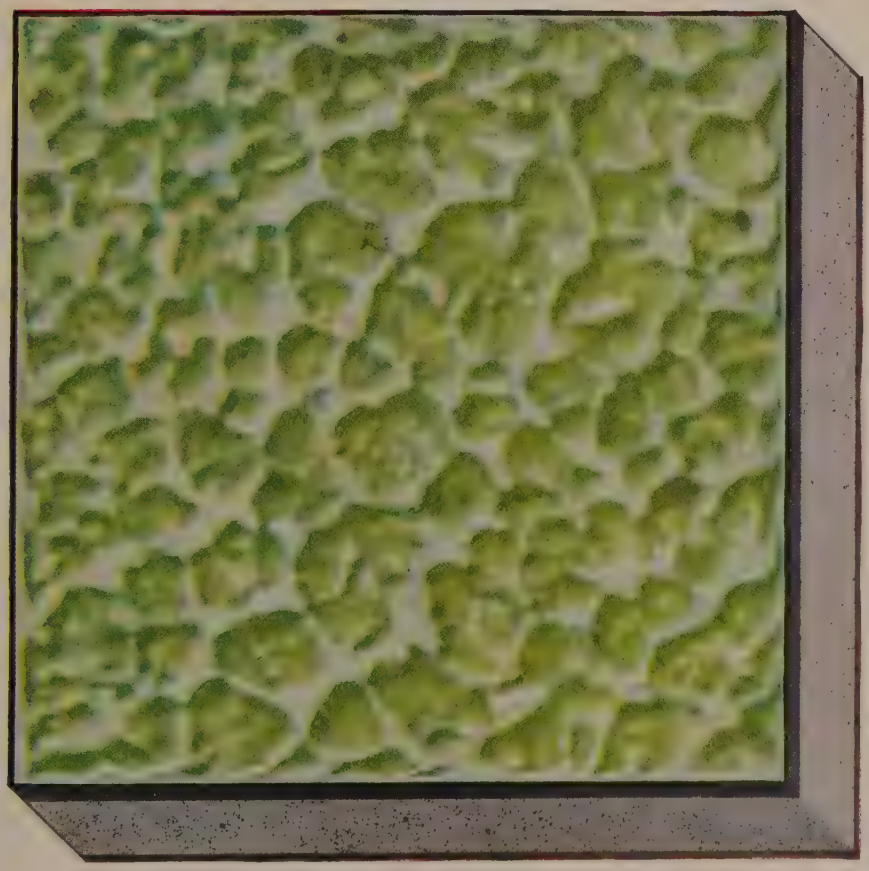
The demand for color in kitchens and bathrooms is increasing by leaps and bounds. Where once the use of colored tile was confined to more costly homes, now—with Panelstone—it is within easy reach of more modest home-builders.

The field is tremendous. It includes new homes, old homes, apartment buildings, hotels, office buildings, billiard parlors and dance halls, restaurants and soda fountains. It is unlimited. And because *your own men* can install Panelstone Tile, the profits are all yours.

CHICAGO PANELSTONE COMPANY, 2456 West George St., Chicago, Ill.



This Beautiful Tile Finished Bathroom



Here is a beautiful, colorful, modern bathroom that will delight every housewife. Finished in durable Panelstone Tile, it can be installed for less than half the cost of ceramic tile. In fact, you can sell your customers a Panelstone Tiled bathroom and kitchen together for less than the cost of ceramic tile in the bath alone.

Rigid—Sturdy

Panelstone Tile is 3/8 of an inch thick—rigid, sturdy and durable. It is fire resisting and will last as long as the building itself. It is already decorated, and can be installed by your own men—no need to share your profits with others.

CHICAGO PANELSTONE COMPANY, 2456 West George St., Chicago, Ill.

CLEAR-VISION WINDOW GLASS

A Product of

AMERICAN WINDOW GLASS COMPANY

World's Largest Producer of Window Glass and Maker of QUARTZ-LITE, the Ultra-Violet Ray Glass for Windows

"The **BEST** Glass"

DISTRICT SALES OFFICES:
New York Chicago Boston New Orleans
St. Louis Atlanta Memphis San Francisco

FACTORIES:
Arnold, Pa. Monongahela City, Pa.
Jeannette, Pa. Belle Vernon, Pa. Kane, Pa.
Hartford City, Ind.

Window Glass

The window glass manufactured by this company, known to the trade as "AWG" CLEAR-VISION Window Glass, is uniformly flat, with a perfectly smooth surface and a brilliant lustre. The American Window Glass Company's standard of grading for quality is the recognized standard for the United States and is higher than foreign standards. "AWG" CLEAR-VISION Window Glass shows less distortion, has greater tensile strength, and will withstand greater wind pressure than any other clear glass used for windows.

Crystal Sheet Window Glass

All window glass manufactured by this company, heavier than single or double strength, such as 26 oz., 29 oz., 34 oz., and 39 oz. or 3/16th glass is known to the trade and sold as crystal sheet.

Crystal sheet glass possesses a brilliant surface, is of uniform thickness and approximates the flatness of plate glass. It is an acceptable substitute for a great many uses and is lower in price than polished plate. Being a lighter product than plate glass, approximately 25 per cent of the cost of sash weights can be saved by its use.

Picture Glass

The American Window Glass Company is the sole producer in this country of 16 oz. picture glass in selected and superfine qualities. This product is generally recognized as the finest picture glass in the world.

Photo Glass

This company manufactures photo glass for camera use, lantern slides and glass for diagnostic X-Ray plates.

Ground Glass and Chipped Glass

We are also manufacturers of ground and chipped glass in plain and fancy designs.

Identification Labels

Each light of single strength and double strength and A Quality window glass, as well as selected and superfine quality picture glass of the American Window Glass Company's manufacture, is labeled for the protection of the purchaser. In the case of picture glass the label appears upon the paper between the lights.

Suggested Specifications

"All window glass to be used in this building shall be the American Window Glass Company's make or equal thereto and shall be (here specify the thickness and quality of glass desired). All A Quality glass furnished must have the manufacturer's label on each light."

If the American Window Glass Company's glass is specified, the company will follow up the installation whenever requested, without expense to the party requesting this service and report whether the glass furnished is the kind, quality, and thickness specified.

Grades and Qualities

"AA" indicates the best quality of window glass. "A" indicates the next best grade and "B" the next quality. Grade "B" is suitable for basement and attic windows, but only grades "A" or "AA" should be used for glazing the windows of the principal rooms of a dwelling.

Thickness and Weight

Single Strength window glass ranges from 10½ to 12 lights to the inch and weighs 18½ ounces per square foot. Double Strength glass ranges from 8 to 9 lights to the inch and weighs 24½ ounces per square foot. Glass thicker than Single Strength or Double Strength is known as "Heavy Sheet Glass" and is designated by weight in ounces per square foot.

26-oz. Glass, range 7½ to 8 lights to the inch
29-oz. Glass, range 6½ to 7 lights to the inch
34-oz. Glass, range 6 to 6½ lights to the inch
39-oz. Glass, range 5 to 5½ lights to the inch
(A sheet of 39-oz. Glass is about 3/16-inch thick.)

"AWG" CLEAR-VISION Window Glass is obtainable from any of the leading distributors throughout the United States.

Because the cost of window glass is trifling compared to the cost of other material is no reason to disregard the prominent part it plays in beautifying a house. This is especially true when you consider that you can buy "AWG" CLEAR-VISION Window Glass—clear and flat, exceptionally strong—for the same low price as the ordinary kind.

TWO BOOKS

Free for the Asking

"The Sunny Side of the House" is full of pictures that illustrate the use of glass in making the home more beautiful, comfortable and healthful. Each page demonstrates the advantages of building and remodeling to bring in the sunlight.

"QUARTZ-LITE Book" describes the wonderfully beneficial effects of the ultra-violet rays of the sun transmitted by QUARTZ-LITE Glass.

Requests for these books and our Complete Window Glass Specifications should be sent to our Home Builders Division, Pittsburgh, Pa.

AMERICAN WINDOW GLASS CO., Farmers Bank Bldg., Pittsburgh, Pa.

Beautiful, Clear, Perfectly Flat Glass

For Windows

Made by ADAMSTON FLAT GLASS COMPANY

WESTERN SALES OFFICE:
11 South La Salle St.,
CHICAGO, ILL.

General Office, CLARKSBURG, W. VA.
JOBBERS IN PRINCIPAL CITIES EAST OF THE MISSISSIPPI

EASTERN SALES OFFICE
1 Madison Ave.,
NEW YORK CITY

Product Flat Drawn Sheet Glass, made in any thickness up to ¼ inch. Due to the advanced process employed, Adamston Flat Glass is recognized as the ideal window glass for residences and the better class of buildings.

A BRAND YOU

CAN DEPEND UPON

The Company and Its Facilities

The organization, plant and facilities of the Adamston Flat Glass Company inspire the confidence and friendship of every customer. Its sales are largely repeat orders from satisfied customers.

The plant is modern in every respect, equipped with 14 machines, having a capacity of 1,000,000 boxes per year, which insures prompt and dependable service. It has every facility for the most efficient and economical manufacture of a dependable and uniform product.

From the first step to the final operation of shipment, the proper care and attention are devoted towards the customer's satisfaction.

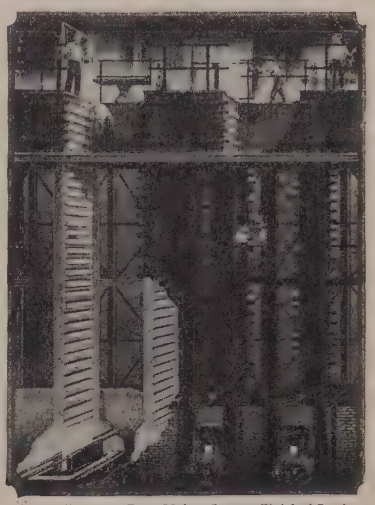
Adamston Flat Glass

Adamston Flat Glass is vertically drawn in perfectly flat sheets. There is no curvature whatsoever. It is the same on both sides—no right and wrong side to look for when glazing, and glazing is done at much less expense.

The distinct features of Adamston Glass are:
(1) Is perfectly flat.
(2) Is of uniform thickness.
(3) Has a natural brilliant fire polish.
(4) Has no bows or warps.
(5) is exactly the same on both sides. No wrong side to look for when glazing.
(6) Has no burns, flattening defects or stone marks.
(7) Does not fade under the most adverse conditions.
(8) Is of great tensile strength.
(9) Is graded according to the highest standards.
(10) Can be furnished in any size or thickness.

ADAMSTON FLAT GLASS

All Grades	Lights Per Inch		Av. Wt. Per Sq. Ft., Oz.	Largest Size Sheet, In.
	Min.	Max.		
Single	10	11	20	40 x 50
Double	7½	8½	25	62 x 84
29 oz.	6½	7¼	29	62 x 96
34 oz.	5½	6¼	34	62 x 96
39 oz.	4¾	5¼	39	62 x 96
¼ in.	3¾	4¼	52	62 x 96



Vertically Drawn From Molten State to Finished Product

Uses

For all purposes where perfectly flat glass is required.
Not only for the lighting of homes and buildings, but for furniture, display cases, etc.

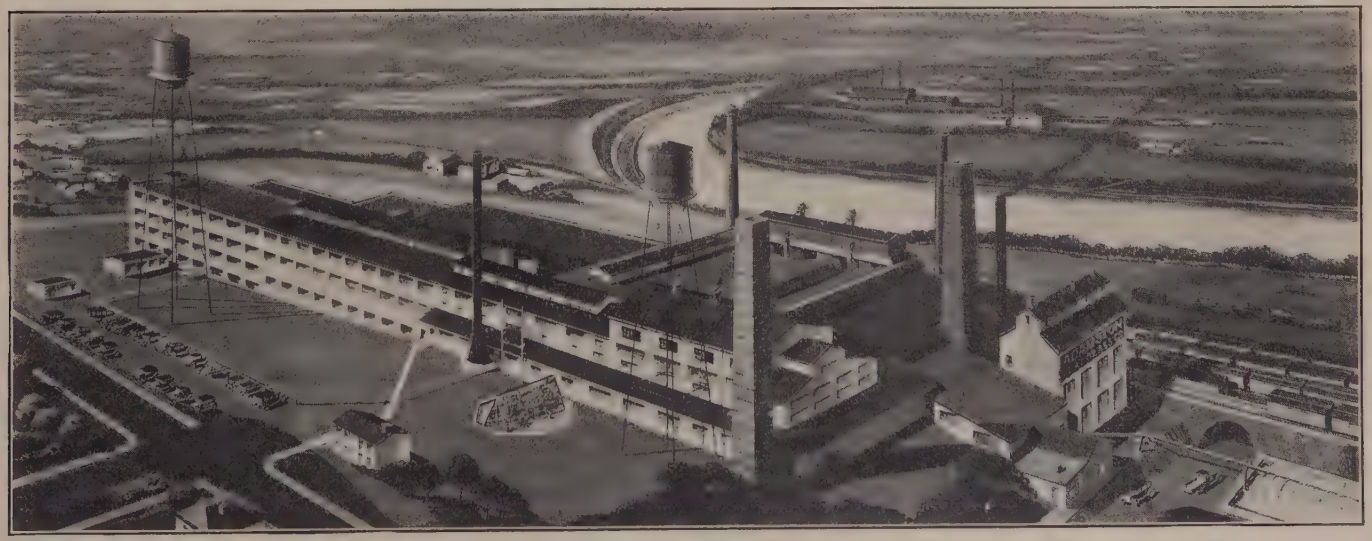
Grading

Adamston Flat Glass is graded according to the highest standards adopted by flat glass manufacturers of America, and these standards of grading are strictly adhered to.

Service and Distribution

Adamston Flat Glass is generally obtainable from the leading jobbers in the principal cities east of the Mississippi. If the jobber is unable to supply you, write direct to Adamston Flat Glass Company, Clarksburg, W. Va.

The company is prepared to furnish any information or offer recommendations to cover any requirements that may be submitted.



Plant at Clarksburg, W. Va.

ADAMSTON FLAT GLASS COMPANY, Clarksburg, W. Va.

SANITAS MODERN WALL COVERING

Manufactured by THE STANDARD PRODUCTS COMPANY

320 Broadway, New York

Product

Sanitas Modern Wall Covering.

Distributed through best wholesale houses in the United States.

Look for this trade mark

Description of Sanitas

Sanitas is a *cloth wall covering,* painted with standard paint pigments in the best linseed oil. A number of coats of this oil and standard pigment paint are applied by machinery.

The *tensile strength* of the finished materials 40 lb. per sq. in. in the warp and 30 lb. on the average woof.

Advantages of Sanitas

The method of manufacture forms a dense, non-porous paint surfacing thoroughly incorporated into the cloth so that the face does not fade, chip or peel from the backing. Being non-porous, soil incidental to use is easily wiped off with cloth or removed by the same method as in cleaning paint. The paint face is impervious to moisture, steam, etc., and will not absorb household odors.

For hospital use, walls covered with Sanitas Modern Wall Covering can be disinfected in the usual manner without injury if, after disinfecting, the walls are washed with warm water.

For public buildings, dwellings, offices, and show rooms, Sanitas Wall Covering has the distinct advantage of long life and versatility of decorative treatment. It can be stencilled, frescoed, and hand painted. Color combinations and mural effects can be created at will.

Structural Accessory

The cloth or canvas backing of Sanitas Wall Covering functions as a structural accessory on plastered walls and wall boards. The canvas acts as a reinforcing agent to strengthen and protect the surface of plaster to which it is applied.

Upkeep Cost of Sanitas

There are many instances where Sanitas has been on the walls for 12 and 15 years, the only upkeep cost being that of washing off with a damp cloth, as occasion demands.

A large industrial plant with a housing equipment of 345 employees' dwellings gave us the following comparative costs of upkeep for 8 years:

Calsomine—Original cost and 3 renewals cost per year, per square yard, 7¼c. Plaster repairs not included.

Spray Paint—Original cost and 2 renewals cost per year, per square 7⅞c. Plaster repairs not included.

Sanitas—Original cost, no renewals, **no plaster repairs,** 2 washings, cost per year, per square yard, including original cost; 6⅔c.

Specifications for Hanging Sanitas (Condensed)

Prepare all plastered surfaces by carefully cutting out and filling all cracks smooth and flush with the plaster plane.

Prepare a glue size by soaking 1 lb. white ground glue in cold water, add 12 qts. hot water and 1 tablespoonful of alum. Apply hot with a paste brush.

Trim the edges of the Sanitas perfectly straight and true with a sharp knife using a long metal faced straightedge. Paste the back of the goods with any standard paste used by paper hangers, working the paste thoroughly into the fiber of the fabric. Butt the edges to a straight true tight joint and press and smooth with a paper hanger's brush. Do not use a hard roller on the seams; wipe over each seam with a soft cloth wrung out in cold clean water. This will render each seam invisible except to the closest inspection.

Literature, Samples and Information furnished as follows:

Descriptive folders and quality samples.

Sample Books showing the full line of designs and colorings.

Name and address of nearest distributor.

Names and addresses of local decorators experienced in the hanging of Sanitas Modern Wall Coverings. These lists compiled from reports made by representatives after personal interviews.

N. B.—The information as to the Approximate Cost of supplying and hanging Sanitas is not authoritative for every locality. Prices naturally vary according to location, labor costs, etc. It is only an approximate guide to preliminary cost estimating. Sanitas is so widely distributed however that estimates can be easily obtained from local Contractors.

Our **Service Bureau** will gladly supply upon request any special information as to Specification forms, methods of application of Sanitas over plaster, concrete or any kind of Wall Board, etc.

THE STANDARD TEXTILE PRODUCTS CO., Dept. 60, 320 Broadway, N. Y.

SANITAS MODERN WALL COVERING

Made by THE STANDARD TEXTILE PRODUCTS COMPANY

320 Broadway, New York, N. Y.

This is a reproduction of SANITAS No. A-4165. Decorative Flat Finish, 1/5 actual size.

Look for this trademark on the back of the goods

Styles for Every Room

Sanitas can be had in styles and finishes for every room in the house requiring the simplest or the most elaborate decoration. Approximately 150 styles to choose from including Plain and Pastel Flat Finish, Decorative Flat Finish, Metalline Brocade and Enamel Finish.

No Waiting for Walls to Settle

Sanitas can be hung as soon as plaster walls and ceilings are dry. Should cracks develop when building settles, they will not show through Sanitas as it is made of strong cloth.

Ideal for Public Buildings

Many hotels, schools, hospitals, apartment houses and lodges find Sanitas an ideal wall covering because of its beauty and its long service. The upkeep cost is low. Easily cleaned with a damp cloth.

25 Years of Experience

Sanitas has been used successfully for the past 25 years by builders and decorators throughout the civilized world. Not a fad of the day but a practical cloth wall covering for walls and ceilings where first cost is the final cost.

Sanitas—the Original

Sanitas is the original, washable cloth wall covering and is obtainable in the largest range of patterns. Every factory roll of Sanitas bears the Sanitas trademark. It is well to look for it to be sure you get the genuine.

48 Inches Wide

Sanitas comes in rolls, 48 inches wide, 12 yards to the roll. This width means fewer edges to trim and fewer seams to match.

Sanitas Sample Book

This large sample book contains the full line of Sanitas and in addition offers many decorating suggestions in full color. Sent only to decorators, builders and architects. Home owners can see the sample book at their decorators'.

Samples and Literature

Booklets and samples of Sanitas will be sent free to anyone mentioning Home Builders' Catalog.

THE STANDARD TEXTILE PRODUCTS CO., Dept. 60, 320 Broadway, N. Y.

"Breinig-Built" Varnishes, Enamels, Paints

Made by BREINIG BROTHERS, INC.

HOBOKEN, N. J.

LUMBER DEALERS

Sell the Finish when you sell the building material

PROTECT YOUR CUSTOMER AND YOURSELF

By Selecting the Right Varnish, Enamel, or Paint with the aid of this Display Cabinet

The above illustration shows the equipment we furnish the Lumber Dealers who sell our Varnishes, Enamels and Paints.

Selling Paints and Varnishes from our Lumber Dealer Display makes it possible for you to secure a large volume of business without a heavy investment and a slow turnover of stock, giving to your customer a selection of colors and products that is as wide and varied as can be found in any of the largest metropolitan centres.

On the majority of jobs where the lumber dealer sells paint, varnish and enamel, the material is not required for immediate use.

With this complete equipment it is possible for you to effect the sale of varnishes, enamels and paints at the same time you are selling your other building materials, most all of which require a paint or varnish product for their protection.

Operating with this cabinet, it has been demonstrated that any live, progressive lumber dealer, regardless of whether he be located on the outskirts of the town or in the centre, can obtain a volume of business in paints and varnishes that is equal to that of any other merchant in town, in many cases greater.

8 *Reasons Why*

1. It stimulates the sale of lumber by showing it in its finished state.
2. It takes lumber out of its raw state and makes it look like it is worth more than the price instead of less.
3. It enables the dealer to round out his service instead of deserting his customers when they most need his help.
4. It shows the customer how to beautify and protect the wood he buys rather than turning him over to someone who does not know one species from another.
5. It provides lumber offices with a beautiful display of wood samples, properly finished—something that is much needed in helping to make sales.
6. Directions are given on each panel. There is no guessing as to how to produce the finish. The dealer supplies the proper material for each species. This insures satisfied customers.
7. Customers prefer this method to any other. It provides wide range of selection, high quality products, fresh stock and bright new packages.
8. The lumber dealer is the man to sell paint. He sells the lumber. He makes the two sales and two profits at once. It is his responsibility to see that his customers obtain proper materials.

In addition, with this equipment, you are able to show your customer just what the finished job will look like. It comprises panels illustrating the colors of Prepared Paint—both exterior and interior; Shingle Stains, Flat Wall Tints—for interior walls; Enamels and Stains—for trim: Varnishes—for interior trim, floors and exterior purposes as well.

Our representative, without any obligation on your part, will be glad to show you how, with a very small investment, it is possible for you to secure a large volume of business in paints and varnishes on which the profit is as great or greater, than anything else you are now selling.

Remember, this plan is operating successfully in over 1000 lumber yards located in all sections of the country.

BREINIG BROTHERS, INC., Hoboken, N. J.

SUGGESTIONS FOR SELECTING COLORS

Homes surrounded by trees and foliage: White, gray, or cream with open surroundings: Green, tan, buff, light brown. Use light shades for body colors, heavier colors for trim and small color areas. Light colors make the house appear larger and dark colors make it appear smaller. Confine color combinations to two or three colors. If your house needs more than two colors consult a master painter on the color scheme. On Colonial houses use white or light cream without contrasting trim. Dutch Colonial, use straw or Colonial yellow, white trim, bronze green blinds, and gray green roof, or use pearl gray body, white trim, green blinds and roof. Hipped roof Colonial house use white body, green shutters, and red roof, or use French gray body, olive green shutters and roof. American suburban style home with pyramid roof, use gray body, white trim, green sash and roof, or use light drab body, ivory trim and green roof. Gable roof house, use soft browns for body, with harmonious green roof, sash and entrance in a light color. Small house or cottage, use brown with ivory or green trim and green roof.

A few of the Products taken from our Very Complete Line

Old Masters' Enamel

This enamel is of the highest quality and is suitable for either exterior or interior use. It has excellent covering qualities, flows freely, does not show brush marks, and will not sag. Dries free from dust in six to eight hours, and hard in forty-eight hours. Will not yellow with age and can be washed with soap and water.

Prepared Paint

A maximum of covering and spreading properties. It produces an extremely durable film, having exceptionally long life. Great covering capacity, and a permanent foundation for repainting work.

Only pigments and colors of the highest quality, together with pure linseed oil and sufficient dryer, are used.

Duo-Var—The Waterproof Varnish

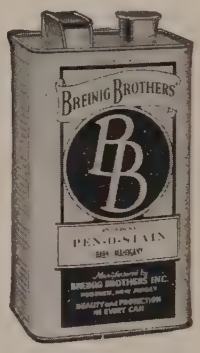
This is an all purpose varnish for floors, trim, linoleum, furniture and all interior and exterior surfaces. Dries hard overnight and is sold under an absolute guarantee to give complete satisfaction.

It is absolutely waterproof and will successfully and convincingly withstand any test advocated for any waterproof varnish.

Ever-Dure Pen-O-Stains

Penetrate the wood deeply and thoroughly, do not raise grain, are true color, and produce a finish that accentuates the beauty of the wood.

With the exception of mahoganies, these stains may be used as one coat finishes, or finished over in wax effect by using Breinig Brothers' Shellac and Ever-Dure Prepared Wax. Wood surfaces may be filled over with Genuine Silent Paste Wood Filler, and followed with required number of coats of our Architectural Varnishes.

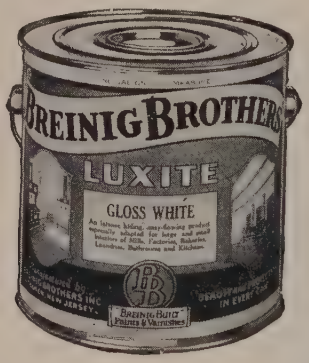


Wallsheen

General appearance is flat but viewed from an angle, it has a slight "sheen" which decorators now demand.

Film is tight and less porous than most flat paints. Therefore, it can be more easily washed and cleaned.

Produced in a variety of light artistic tints, spreads evenly, flows out smoothly and does not show laps or brush marks. Can be stippled if desired. For use on plaster, concrete, brick, wallboard, canvas or wood walls and ceilings.



Luxite

Enamel finish for interior walls and woodwork, especially adapted for kitchens, bathrooms and pantries. Porcelain-like finish does not soil easily and can be washed without injury to surface.

One coat will cover average surface while two coats will cover any surface. It remains white and will not crack or chip.

Made in Flat, Egg-shell and Gloss.

Why we call it

Paint is less than 1/300 of an inch thick, and allowance must be made for contraction and expansion, and the paint must retain its fresh appearance, as long as possible, and wear down evenly over a period of years, in order that the surface may be in proper condition for repainting.

In "BREINIG-BUILT" paint we amply cover these qualifications, and in addition give it most exceptional flowing qualities. The vehicle of our paint is pure linseed oil, with necessary dryer, and we treat the oil in a scientific manner. Our paint has more flow than paints made from untreated oil.

Paint film breaks first in the tiny crevices left by brush.

"BREINIG-BUILT"
Paints & Varnishes

"Breinig-Built"

Paint with an even flow will leave less brush marks than the other type, will not retain as much dirt and dust and will keep its fresh appearance longer and better protect the wood and metal surfaces, as moisture cannot easily penetrate this more even film. It also has much more gloss which it retains well.

The different parts, properly compounded, make a perfect whole, and while the film is extremely thin, it is scientifically "built."

It costs no more to use BREINIG BROTHERS' VARNISHES, ENAMELS and PAINTS than the ordinary finishes to be found on the market; in fact, quite the reverse is true, for by their use beautiful and lasting effects will be obtained.

BREINIG BROTHERS, INC., Hoboken, N. J.

EAGLE *PURE* WHITE LEAD

(Soft Paste or Regular Grind)

Makes a PURE LEAD PAINT

Manufactured by The EAGLE-PICHER LEAD COMPANY

Producers of Lead, Zinc and Allied Products
Main Offices: 134 N. La Salle Street, CHICAGO
Eleven Plants, Branches in All Principal Cities

EAGLE *Soft Paste* WHITE LEAD
Saves Painting Time

For producing a pure lead paint of greatest beauty and economy, Eagle-Picher offers Eagle Pure White Lead in two forms: *Regular Grind,* and the new *Soft Paste*. They are both the same Old Dutch Process pure white lead, that makes the finest paint—only Soft Paste has more linseed oil added (15% instead of 8%), so that it comes to you already broken up to what painters call "shop-lead" consistency. It can be sent out on the job unopened, quickly thinned to painting consistency, tinted any color in a moment.

This new "Soft Paste" form saves painting time, and painters have welcomed it for its greater convenience.

In 100, 50, 25, 12½ pound steel containers, both Soft Paste and Regular Grind.

The characteristic black and white Eagle Soft Paste Package

EAGLE WHITE LEAD (*Regular Grind*)
Used with EAGLE *Flatting Oil*
for Flat or Eggshell Interior Finishes

For all types of interior work on walls, ceilings or woodwork, where a flat or eggshell finish is desired (whether plain, tiffany, mottled, etc.) we recommend the regular grind EAGLE White Lead in combination with the new Eagle Flatting Oil. This combination produces interior finishes of the highest artistic beauty.

The advantages of Eagle Flatting Oil are many. It dries to a beautiful, glossless finish, pure white in color, shows no brush marks, is enduring and economical, and easily washed. Makes an excellent bronzing liquid (mixed with a little spar varnish, and either bronze or aluminum powder); also glazing or blending liquid for tiffany effects; and fine undercoating for enamel.

Eagle Flatting Oil comes in quart and 1 gallon cans and 5 gallon drums, each equipped with easily-opened "Upressit" caps.

The Endurance of Pure Lead Paint

is a matter of fact. It is traditional in the painting profession to use pure lead for long-lasting satisfactory painting. It may be used pure white or tinted any color in a moment. It is used either for plain finishes or the most modern multi-colored patterns.

Reg. U. S. Pat. Off.

INFORMATION FREE

We will gladly furnish any information that you may desire on any phase of home decoration or modernization, where the question of painting enters in. Mixing and tinting instructions will be gladly furnished you or your painter.

THE EAGLE-PICHER LEAD COMPANY, 134 N. La Salle Street, Chicago

"NICE" PAINT AND VARNISH PRODUCTS

Manufactured by EUGENE E. NICE COMPANY

Factories at PHILADELPHIA, PA. and CAMDEN, N. J.
Address All Correspondence to Sales Offices, 268-274 S. 2nd St., PHILADELPHIA, PA.

"Nice" Pure Linseed Oil Paint

This is a quality paint that is not surpassed. It excels in covering and wearing properties. Along with White Lead as pigment it contains a goodly percentage of Pure American Zinc which adds to the protecting qualities of the paint, increases its life and makes the colors cleaner and more unchangeable.

It will require fewer gallons if you use "Nice" Paint because quality always tells in greater covering capacity and at the same time a more durable paint film.

Neeckote Flat Wall Paint

Neeckote dries smooth and with that dull, eggshell-like sheen that is almost flat.

It is washable. Even the white covers and hides to an extent that you would not think possible. Two coats are sufficient for high class work.

"C. M. T." Coating for Cement, Stucco, etc.

Exteriors, Interiors and Floors. Not to be used on wood work. "C. M. T." is made especially for Cement and Stucco Surfaces. On work that is recently new, "Nice" Cement Primer should first be used and "C. M. T." then applied over the primer, the primer being colorless.

"Nice" Shingle Stains

Creosote Base. Attractive, durable colors.

"Nice" Liquid Wood Filler

For natural wood finishing. A durable coating that fills and brings out the beauty of the wood. Saves time and labor.

Neeolyte White Enamel

Pure white, free flowing long oil enamel! For large surface work where a particularly fine finish is desired, order "Neeolyte."

"Nice Q" White Enamel

This is another high grade White Enamel. Very durable. Dries somewhat quicker than "Neeolyte."

"Yellow Shield" White Enamel

Quick drying. A good durable Enamel for hurried work. Very white and easily applied.

"Nice" No. 6368 Flat White

Works easily, is very white. Exceptionally good covering and hiding qualities. An ideal undercoat for White Enamel. Two coats bring the surface to a smooth, solid white.

Neeospar Varnish

High standard painter's long oil, waterproof spar varnish. Good body, pale. Free flowing.

Electspar Varnish

Durable, pale, waterproof spar. Dries in 4 hours. An all purpose varnish for every use, exterior or interior.

Trokal Floor Varnish

Medium color, heavy body, very durable. Made to stand the hard wear of being walked on constantly.

Superior Inside Varnish.
Extra Inside Varnish.
Master-Gloss Varnishes.
All "Nice" Varnishes are waterproof.

Other Standard "Nice" Products

"Nice" 4-Hour Enamels, "Nice" Floor and Deck Paint, "Nice" Barn and Roof Paint, Japan Driers, Shellac Varnishes, Colors in Oil, Auto Enamels, STAIN-NAMEL, Varnish Stain Finish.

"NICE" Paint and Varnish Products are sold through dealers. Ask your local dealer to supply you or write us. Please do so. No obligation whatever is incurred in asking for wholesale prices, color charts, specifications, etc.

YOUR HOME—the visible expression of your happy, every day life—deserves "NICE" Paints and Varnishes. There's real, honest to goodness quality in every brush full.

EUGENE E. NICE CO., Offices and Sales Dept., 268-274 S. 2nd St., Phila., Pa.

JOHNSON'S INTERIOR FINISHES

Manufactured by S. C. JOHNSON & SON

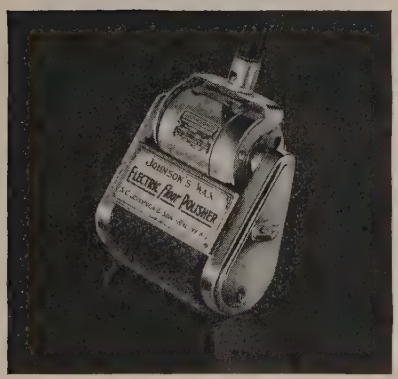
"The Wood Finishing Authorities"

RACINE, WISCONSIN

ONE OF THESE BRANCHES IS NEAR YOU

Atlanta
16 West Peachtree Pl.
Boston
852 Summer St.
Cincinnati
2259 Gilbert Ave.
Cleveland
1645 Superior Ave.
Dallas
2824-26 Main St.
Denver
1745 Arapahoe St.
Detroit
5432 Grand River Ave.
Kansas City
2433 McGee Trafficway.
Los Angeles
1151 Santee Street
Milwaukee
936 Third St
New Orleans
500-506 Magazine St.
New York City
270-276 Lafayette St.
Omaha
1407 Harney St.
Philadelphia
620 S. Delaware Ave.
Pittsburgh
926 Duquesne Way
San Francisco
1250 Folsom Street
St. Louis
2116 Locust Street
St. Paul
1930 St. Anthony Ave.
Seattle
314 Bell Street

Johnson's De Luxe Electric Floor Polisher. Universal Motor; 110-115 volts, A.C. or D.C.; 2,100 r.p.m.; Tampico bristle cylindrical brush, 4" in diam. by 7" wide. Weight, 13½ pounds.



Johnson's Household Electric Floor Polisher. Universal motor; 110-115 volts, A.C. or D.C.; 2,100 r.p.m.; Tampico bristle cylindrical brush, 4" in diam. by 4½" wide. Weight, 9 pounds.

Success Means Authority:

Johnson's Interior Finishes are specialized, each one designed to do a particular job perfectly. This concentration upon specific purposes has produced eminently successful finishing materials. Thus, it is with authority that S. C. Johnson & Son presents herewith its line of finishing materials, the fruit of forty years of successful experience in its field.

Beauty, Permanence, and Economy with Wax:

Uncovered floors . . . waxed. That is the vogue in modern homes. No touch of the decorator's hand reflects so much credit to his ability as the brilliant, uniform sheen he creates upon a floor with Johnson's Wax Polish. The easiest and quickest decorating material to apply and polish, it is also the most economical floor finish for the owner, preserving his floors while adding the final touch of beauty and good taste in his home.

Johnson's Wax Polish:

Forty years of constant endeavor have developed in Johnson's wax the most satisfactory floor wax obtainable. Based on Carnauba wax, it imparts an exquisite luster, is slip-proof, and offers the utmost resistance to wear. It is the ideal polish for furniture, woodwork, and automobiles. It is obtainable in paste or liquid form.

The Johnson Electric Floor Polisher:

The Johnson Electric Floor Polisher is the first successful polisher for use in the home. It is the best in the field. It has the lowest price of any. Speed is substituted for weight. The result is greater mobility even than a vacuum cleaner. Still, it does more work than a much heavier machine running at lower speed. The sturdy Tampico bristle brush spins at 2,100 r.p.m. burnishing the wax to a firm and brilliant finish. Two models are made, the De Luxe for contractors, which polishes 2,000 square feet an hour, and the Household size for ordinary home use.

S. C. JOHNSON & SON, Dept. H. B. C., Racine, Wisconsin

Johnson's Varnishes:

Johnson's FLOOR VARNISH is literally "made to walk on." It is tough and durable beyond measure. Absolutely waterproof. Dries hard overnight. May be rubbed and polished if desired.

Johnson's FLAT VARNISH gives a beautiful rubbed effect without labor and expense of rubbing. Same working and wearing qualities as Johnson's FLOOR VARNISH and may be mixed with it to obtain any gloss desired. New process overcomes every complaint ever raised against flat varnishes in general.

Johnson's SANI-SPAR varnish for both exterior and interior use is impervious to hot, cold or soapy water and to alcohol, ammonia, etc. Will stand the severest tests of weather and temperature. Exceptionally pale. The perfect Spar varnish for boats and outdoor work of all kinds.

Johnson's FLOOR AND FINISHING VARNISH is an ideal all-purpose varnish wherever cost is a consideration. Very easy working, heavy body, dries to brilliant gloss in 12 hours, and can be rubbed and polished. Made for the professional painter.

Johnson's INTERIOR TRIM VARNISH is exceptionally full-bodied. Does a beautiful job on standing trim and does it economically. Free flowing, hard drying, elastic, durable. Can be rubbed and polished. Saves an extra coat.

Johnson's Perfectone Under-Coat and Enamels:

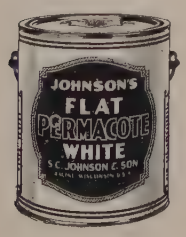
Johnson's PERFECTONE UNDER-COAT is the smoothest and best-covering undercoat that can be made. It gives the perfect foundation that "makes" any enamel job. Works freely, will not run or sag, dries hard in 18 to 24 hours.

Johnson's PERFECTONE ENAMEL is a long-oil architectural enamel of the finest grade, the result of long and diligent research in the Johnson laboratories. It will never check, chip or peel. Guaranteed to stay white. Wears like porcelain. The Gloss finish comes in white only, the Satine finish (hand rubbed effect) in white, ivory and gray.

Johnson's GLO-COAT ENAMEL is a highly specialized product. It has all the characteristics of the highest grade enamel plus one outstanding purpose—**exceptional covering capacity.** Made to eliminate one coat of under-coat.

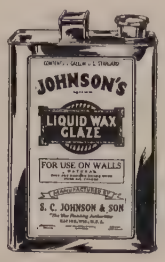
Johnson's No. 25 ENAMEL contains more real value than is to be found in any other medium enamel on the market. Does a job that you can be proud of at a cost that allows you to beat competition.

Johnson's Permacote Flat Wall Paint:



Johnson's PERMACOTE is a perfect flat wall paint. For plaster, wood, metal, burlap, or wall board. Easy working, permitting fast application, and will not show laps or brush marks. Stands repeated washings. As a priming coat on new walls use Permacote with Johnson's WALL SIZE VARNISH.

Johnson's Liquid Wax Glaze for Textured Walls and Wallpaper:



Johnson's LIQUID WAX GLAZE is a revolutionary decorating material. Supplied in natural color, it can be tinted any color or shade desired with standard chemically-pure oil colors, producing jobs of unique beauty over sand-finish plaster or any prepared plastic paint. It is the easiest and quickest glaze in the world to apply or to change, yet absolutely permanent in effect. Can be washed with soap and water.

Johnson's Liquid Wax Glaze spreads a beautiful transparent film of protection over wallpaper which prevents tearing, splitting and general deterioration. Keeps patterns and colors bright and new. Can be washed with damp cloth. A new source of profit for painters and decorators.

Johnson's Wood Dye:

Johnson's WOOD DYE, oil or spirit, is the world's standard. For 25 years it has been relied upon by painters and decorators the world over. Perfectly transparent, containing no pigments, the beautiful colors of this dye penetrate deep into the wood without raising the grain and last as long as the wood itself. It is easy to use, will not show laps or streaks, and dries quickly.

Johnson's PASTE WOOD FILLER differs from all ordinary fillers. It is made on a base of finest Metronite Quartz from our own mines. It forms an oval pore that will never shrink or crumble. The easiest filler to use and the cheapest filler in the long run.

Johnson's UNDER-LAC (natural or mahogany) is an excellent sealer over Johnson's WOOD DYE or any oil stain in place of shellac. Dries for sanding in one hour. The mahogany brings out the color of the dye and protects forever against fading.

Other Johnson Products:

Electric Solvo, paint and varnish remover.
Quick Drying Varnish, dries in 4 hours.
Rubbing Varnish, especially for rubbing and polishing.
4 hour Lacquer, for new wood floors and linoleums.
Kleen Floor, for cleaning waxed floors.
Powdered Wax for dance floors.
Weighted Polishing Brushes for waxed floors.
Wax Applying Mops, large and small size.
Electric Paint Burner, for removing paint quickly and easily, without fire hazard. Not for sale. Developed solely for use by Johnson painters and furnished FREE with certain special deals on Johnson Interior Finishes.

Wholesale Prices to Painters and Decorators:

Our wholesale price list is extended to painting and decorating contractors because of the volume of materials they use. Write for this price list and complete data on treatment of floors, woodwork, and furniture.

S. C. JOHNSON & SON, Dept. H. B. C., Racine, Wisconsin

PAINTS—VARNISHES—MURESCO

Manufactured by

Benjamin Moore & Co.

Paints, Varnishes and Muresco

NEW YORK
CHICAGO
CLEVELAND

ST. LOUIS
CARTERET
TORONTO

Rain or Shine

Products bearing the name Benjamin Moore & Co. are considered excellent standards of quality. For 46 years users have purchased them at reasonable prices and with the confidence of satisfactory results. This Line covers every practical, and many special needs. Each product, because of the care governing its manufacture, may be considered the best for its purpose.

Use Moore Paint

For Exterior Painting

MOORE'S HOUSE PAINT is a Pure Linseed Oil product for use on House, Barn, Garage, Fences and other exposed surfaces of Wood, Brick or Metal. It dries hard with a good gloss yet possesses sufficient elasticity to prevent checking, cracking or peeling. Its long wearing and satisfactory resistance to the most severe climatic conditions are proof of its quality. This product is ready for use.

MOORE'S PORCH and DECK PAINT is the ideal product for exposed surfaces subjected to extreme wear and abuse. It gives to Porch Floors and Steps and Boat Decks of Wood or Canvas, a tough film that offers excellent service. It is available in Six Colors.

MOORE'S SHINGLE STAIN is a liquid wood preservative for use on Wood Shingles, Clapboard and Exterior Woodwork. Twelve Shades.

For Interior Painting

SANI-FLAT is a flat oil paint manufactured in Twenty Colors. It produces a beautiful, velvety finish for Walls and Ceilings. It is easy to apply, thoroughly reliable and reasonable in price. Surfaces painted with Sani-Flat are washable.

INTERIOR GLOSS is an enamel-like paint for Walls and Woodwork of Bath, Kitchen, Hallway, Laundry and all interior surfaces where a durable, high gloss finish is desired.

MURESCO is the type of product often desired for Wall, and particularly Ceiling decoration. Muresco is a powder prepared for use by mixing with Boiling Water. It enjoys the largest sale in the world of products of this kind and is universally recognized by both painter and amateur as the easiest to apply and most satisfactory wall finish.

By mixing with Boiling Water, adhesion of the material to the surface which is painted, is assured. Muresco will not crack, chip, peel or rub off. It is superior to kalsomine. Made in Eighteen Tints and Ten Colors.

For Sizing, and Sealing Porous Surfaces

IMPERVO SURFACER overcomes the difficulties met in painting new plaster and old porous surfaces. It neutralizes the injurious action of Lime, Acid, Alkaline Salts and Water. Impervo Surfacer prevents peeling, spotting and staining. Equal parts of Impervo Surfacer and Sani-Flat can be mixed to form a combination Size and First Coater, thus eliminating one coat of paint.

FILL-COAT is a combined Filler, Size and Primer to be used on fibrous open pored Wallboards. It is a semi-paste product of such consistency that it may be thinned by the painter to suit the varying porosity of the surface. Practical, economical and easy to apply. One coat seals thoroughly, giving a smooth, even impervious film. Wallboards need no additional priming or sizing before the application of paint. May be tinted with Colors in Oil.

For Enamelling

MOORAMEL is the highest type product for Exterior and Interior decoration. Long in oil, it offers the most enduring resistance to severe weather conditions. On the Interior it gives to Walls and Wood Trim that porcelain-like finish so often desired. Mooramel is manufactured in Eggshell and High Gloss White, and High Gloss Blue, Gray and Ivory Tints. New surfaces to be enamelled are prepared by sanding, and coating in with Moore's Enamel Underbody.

UTILAC is a quick drying utility enamel for use on Walls, Furniture, Floors and all surfaces or articles of Wood, Metal, Plaster or Wallboard. It is durable, economical, easy to brush and has no offensive odor during application. It will not pick up undercoats. Utilac flows out evenly to a smooth finish. It is manufactured in many bright colors.

UTILAC VARNISH has the durability and fine appearance of a high grade floor varnish, plus a rapid dry. It can be used successfully on any interior surface.

BENJAMIN MOORE CO., 511 Canal St., New York City

PAINTS—VARNISHES—MURESCO

From Floor to Ceiling

Manufactured by

Benjamin Moore & Co.

Paints, Varnishes and Muresco

NEW YORK
CHICAGO
CLEVELAND

ST. LOUIS
CARTERET
TORONTO

Use Moore Paint

For Staining

OIL WOOD STAIN is intended for use on new close-grained woods to imitate natural hardwoods such as Oak, Cherry, Walnut or Mahogany. This product is a pigment stain, the colors are non-fading and it will not raise the grain of the wood. It dries with a flat finish which may be varnished, waxed or shellacked.

For Varnishing

Varnish satisfaction is attained when specific products are used to meet each particular requirement.

MOORE'S IMPERVO VARNISHES are made with a definite purpose. For each Interior or Exterior surface there is only one entirely satisfactory product. Impervo Varnishes are manufactured with this idea in mind. They will meet the most exacting demands.

The LINE of IMPERVO VARNISHES comprises products for Cabinet, Coach, Rubbing, Interior Finish, Floor and Linoleum, Exterior Finish, Spar and Marine Work.

For Painting Floors

MOORE'S FLOOR PAINT and CONCRETE FLOOR PAINT are hard-drying enamel paints for use on Wood and Concrete Floors and Plaster and Metal surfaces. These products cover well, work easily and dry with a durable high gloss finish that may be washed with soap and water. Concrete Floor Paint may be used on Concrete and Cement.

Miscellaneous

For every Paint and Varnish need Benjamin Moore & Co. can supply a product unsurpassed in respect to Quality, Economy and Satisfaction Resulting.

In addition to the above products Cement Coating, Liquid and Paste Fillers, Special Trimming Greens, Pure Colors in Oil, Tile-Like Enamel and Color Varnish are well-known, widely used and worthy of your consideration.

The cost of labor is so high that every precaution must be made to select products the equivalent in quality of the money expended in applying them. It costs as much to apply cheap material. In Moore's Products you are assured of Good Covering, Durability and Beauty.

The following specifications are suggested for a six room and bath, clapboard house with shingle roof, open porch and unattached garage. On the first floor are Living Room, Dining Room and Kitchen. The second floor comprises three Bedrooms and one Bath. Color Cards showing the suggested color schemes, and the names of dealers from whom these products can be purchased will be mailed to you upon request.

Specifications for Small House Painting

EXTERIOR

SURFACE	HOUSE	PORCH	GARAGE
Roof	No. 50 Moss Green Shingle Stain	No. 50 Shingle Stain	No. 50 Shingle Stain
Walls	Outside White House Paint	White House Paint	White House Paint
Trim	No. 34 Chrome Green House Paint	No. 34 House Paint	No. 34 House Paint
Floor		Light Gray Porch and Deck Paint	Gray Concrete Floor Paint

INTERIOR

SURFACE	LIVING ROOM	DINING ROOM	KITCHEN	HALLS
Ceiling	No. 4 Muresco	No. 4 Muresco	White—Interior Gloss	No. 12 Muresco
Walls	Ecru Sani-Flat	Light Buff Sani-Flat	White—Interior Gloss	Ivory Utilac
Woodwork	Ivory Mooramel	Ivory Mooramel	Light Green Utilac	Ivory Mooramel
Floor	Elastic Floor Varnish	Elastic Floor Varnish	(Linoleum)—Utilac Varnish	Elastic Floor Varnish

SURFACE	BEDROOM	BEDROOM	BEDROOM	BATH
Ceiling	No. 4 Muresco	No. 12 Muresco	No. 12 Muresco	Ivory Utilac
Walls	Pea Green Sani-Flat	Ecru Sani-Flat	Pink Sani-Flat	Ivory Utilac
Woodwork	Utilac—(Half White) (Half Jade Green)	Ivory Utilac	Pink Utilac	Utilac—(Half White) (Half Medium Blue)
Floor	Jade Green Utilac	Oak Utilac	Utilac Varnish	

Specifications For Application Of Material

SHINGLES—2 coats Shingle Stain; add 1 quart Pure Linseed Oil per Gallon to 1st coat.

CLAPBOARD—3 coats House Paint; add 1 pint Pure Turpentine per gallon to 1st coat.

CEILINGS—2 coats; Impervo Surfacer (1); Muresco (2).

WALLS—3 coats; equal parts Impervo Surfacer and Sani-Flat (1); Sani-Flat with 1 pint Pure Linseed Oil per gallon added (2); Sani-Flat (3). Utilac or Interior Gloss unthinned in 2nd coat of 2 coat work.

WOODWORK—3 coats; Enamel Underbody thinned with 1 pint Pure Linseed Oil per gallon (1); equal parts Underbody and Mooramel (2); Mooramel (3). Use Utilac unthinned for 2 coat work.

FLOORS—2 coats; add 1 pint Pure Turpentine per gallon to Varnish, Floor Paint, Porch and Deck Paint or Utilac (1); Varnish, Paint or Utilac unthinned (2).

BENJAMIN MOORE CO., 511 Canal St., New York City

Detachable Disappearing, Adjustable Recess and Pivot Door Beds

Made by BROWN DETACHABLE DISAPPEARING BED COMPANY

201-4 Gloyd Building, Kansas City, Mo.

Branch Office, St. Louis, Mo., 4458 Delmar Boulevard

Sales Representatives in Principal Cities

Products

Detachable (Roller Type) Beds.
Wall Beds.
Pivot Door Beds.
Also Distributers of Burnerator Incinerators.

Plan Service Department

Architects, contractors and realtors are invited to ask for our plan service suggestions and detail layouts of bed installations. No charge for this service.

Features of Brown Beds

A full-length bed (spring 6 ft. 4 in.) that can be installed with stock size doors—2 ft. 6 in. by 6 ft. 8 in. or 2 ft. 8 in. by 6 ft. 8 in. by 1¾ in.

All types can be furnished with soft top coil springs or link fabric springs.

All Brown beds are equipped with patented third rail non-saggable springs, every spring built with the third rail extending between and parallel to the side rails, holding end angles taut and thereby preventing sagging.

Brown roller type beds are equipped with "Perfect" double race roller bearing casters. Casters of this type are most important because they always work easily and quietly and will not mar the finest floors or rugs.

All types are made in twin, single, three-quarter and full sizes.

All tubing made of the finest grade of steel. All castings certified malleable. Sturdy construction throughout—a guarantee against future breakage and repairs.

Standard finishes are vernis martin, plain wood, American walnut and mahogany. Special finishes to order.

Detachable (Roller Type) Beds

An unattached, easily movable bed (Fig. 1) that can be rolled from a closet or other location, in an upright position, to any part of the room or out on a sleeping porch with very little effort.

This type of bed weighs only 160 lbs. (compare this weight with other makes).

Exclusive features include:

Patented extension of the base standard, making it impossible to jack-knife the bed on top of the spring frame.

No obsolete counterbalance weights. Entire power to raise and lower bed is handled by extension springs, making the bed balance perfectly under operation.

A track (furnished by us), attached to the floor, guides the bed when it is taken from or put into the closet, thereby eliminating the possibility of hitting the door jambs. See details on the following page.

Fig. 1. Detachable (Roller Type) Bed

Adjustable Recess Wall Beds

These beds are concealed in a wall recess behind two hinged doors and open straight out (Figs. 2 and 3).

These beds have an adjustable feature—when lowered in position for use, the head end of the bed and the head of the sleeper are out flush with the door jambs. If desired, these beds can be installed stationary to floor of recess. See details on the following page.

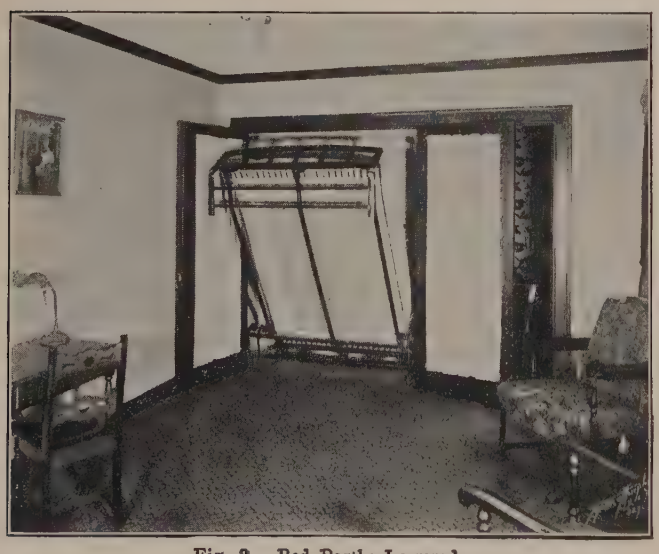


Fig. 2. Bed Partly Lowered

Fig. 3. Bed in Position in the Room

Recess Wall Beds

BROWN DETACHABLE DISAPPEARING BED CO., Kansas City, Mo.

Pivot Door Beds

This type of bed is concealed in a closet behind a pair of doors, one pivoted and one hinged. The bed is attached to the pivoted door, which revolves in a complete circle, so that the opening is completely closed when the bed is concealed in the closet or in use in the room (Figs. 4 and 5).

The weight of the bed always rests directly on the floor, therefore there is no strain on the door or jamb, no sagging or warping of the door, and the bed always adjusts itself to settling of the building.

Bed can be pivoted right or left, provided there is sufficient pocket for the bed. Pivot hardware is furnished by us.

This type of bed requires small closet space. A closet 26 in. deep (behind door to plastered wall) by 5 ft. 6 in. wide, with two doors each 2 ft. 8 in. by 6 ft. 8 in. by 1¾ in., accommodates a full size bed (see details). By using three doors (2 pivoted and 1 hinged), each 2 ft. 6 in. by 6 ft. 8 in. by 1¾ in., and increasing the width of the closet to 8 ft., twin pivot beds can be accommodated as shown in the details. In each case, the hinged door can be used at all times for access to the closet.

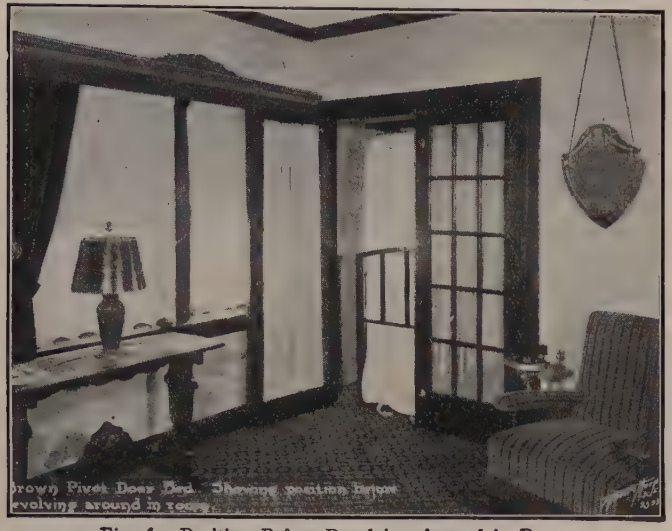
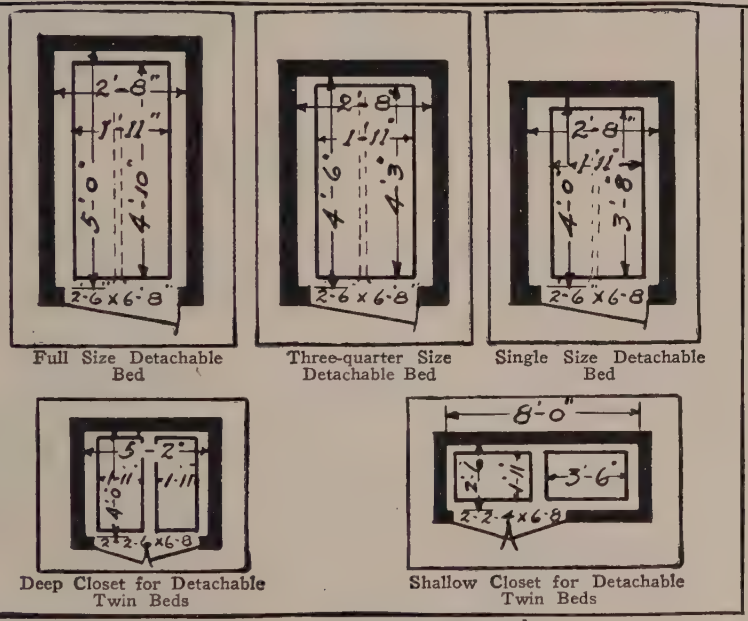


Fig. 4. Position Before Revolving Around in Room

Fig. 5. Bed in Position in Room

Pivot Door Beds



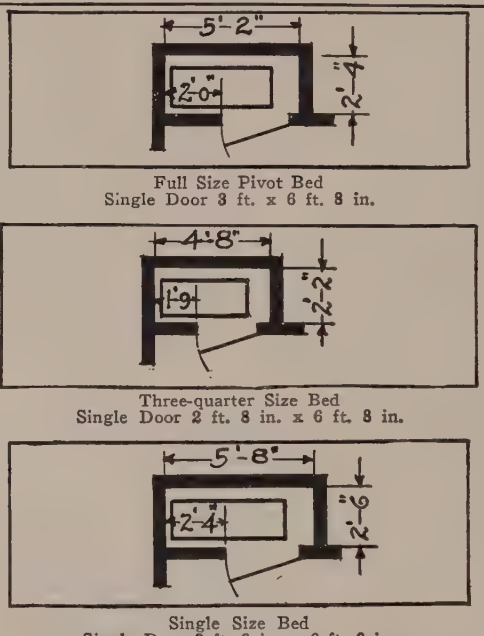
Full Size Detachable Bed

Three-quarter Size Detachable Bed

Single Size Detachable Bed

Deep Closet for Detachable Twin Beds

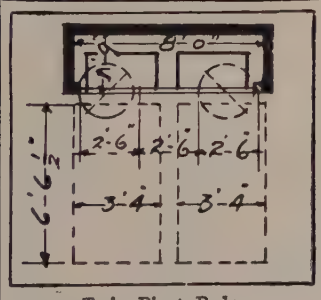
Shallow Closet for Detachable Twin Beds



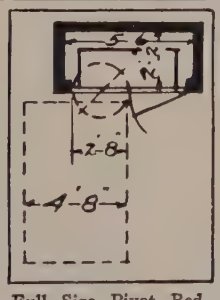
Full Size Pivot Bed
Single Door 3 ft. x 6 ft. 8 in.

Three-quarter Size Bed
Single Door 2 ft. 8 in. x 6 ft. 8 in.

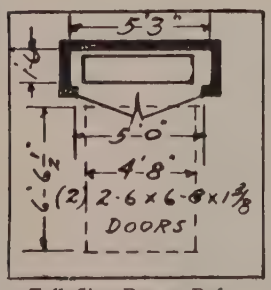
Single Size Bed
Single Door 2 ft. 6 in. x 6 ft. 8 in.



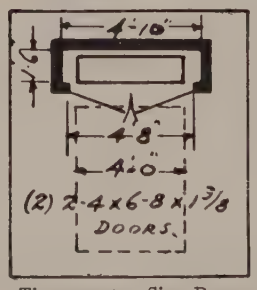
Twin Pivot Beds
Three doors, each 2 ft. 6 in. x 6 ft. 8 in. x 1¾ in.



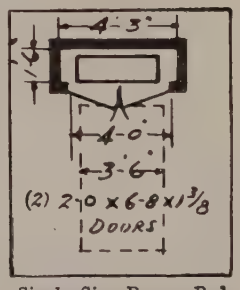
Full Size Pivot Bed
Two Doors, each 2 ft. 8 in. x 6 ft. 8 in. x 1¾ in.



Full Size Recess Bed



Three-quarter Size Recess Bed



Single Size Recess Bed

Typical Closet Plans for Brown Beds

BROWN DETACHABLE DISAPPEARING BED CO., Kansas City, Mo.

HOLMES CONCEALED BEDS

(The Original Concealed Beds—Twenty-Four Years of Success)

Distributed by CONCEALED BED CORPORATION

58 East Washington Street, CHICAGO

Exclusive Sales Agents for Holmes Disappearing Bed Co., and Marshall & Stearns Co.
Representatives in all Principal Cities

GENERAL FEATURES:

Require Least Closet Space

Holmes Beds require less space than any other disappearing beds. This is important as a matter of only a few inches often necessitates changes in the entire plans.

Size and Style for Every Need

Holmes Beds are made in "twins," single, three-quarter and full sizes. All use standard sizes of doors and require minimum closet space. Any combination of concealment can be used—French doors, flush doors, panels, bookcases, cabinets, etc., to open into dressing rooms or storage closets. All sizes and styles carried in stock for immediate shipment.

Most Beautiful Beds Made

Holmes Beds rival the beauty of the most costly furniture. Standard models include all-steel beds in American Walnut or Mahogany grained and varnish finish, as well as attractive enameled steel beds with *wood ends* in walnut or mahogany, period designs. The use of period design wood head and foot ends marks a new day of beauty in built-in furniture.

Safety Features—Full Double Deck Coil Springs

All Holmes Beds have automatic foot leg control rod. It is impossible for foot legs to collapse. Holmes roller beds have patented automatic safety lock which positively prevents "jack-knifing." Holmes Beds use full Double Deck coil or box springs. Holmes coil springs have coils of 11½ gauge wire, making the most comfortable concealed bed on the market. Springs extend full length and width of bed.

Non-Slip Mattress Clamp

The Holmes Clamp is the easiest to operate. It is a solid casting, holding the bedding and pillows firmly in position, yet requires only a slight pressure to operate it.

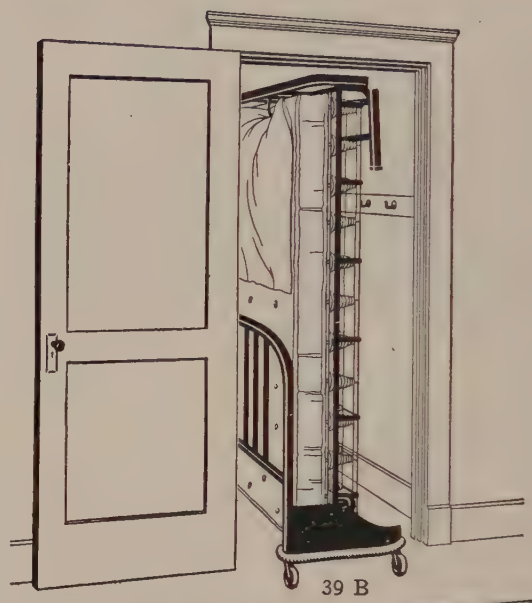
Bumpers and Rollers

No metal, not even a rivet head, is exposed to contact on Holmes Roller Beds. It absolutely prevents damage to furniture and woodwork. Holmes uses solid maple casters fitted with one set of roller bearings and two sets of thrust ball bearings. They will not mar floors or rugs.

Booklets and Diagrams

Reference booklets are yours for the asking, showing all features of Holmes Concealed Beds, diagrams of closet space and plans of homes, apartments and hotels in which Holmes Beds are used.

Holmes Special Pivot Bed No. 63



39 B

Holmes Roller Bed (Model 39 B) The Original Roller Bed

This type of Holmes Concealed Bed can be kept in any part of the home—in a closet—in a corner hidden by draperies—in another room—or in the hall. It is a full size standard bed including all of the regular Holmes features. Made with square tubing and cane panels or wood ends. Standard finishes are American Walnut and Mahogany.

Closet space required for straight run-in. Depth 5 ft.; minimum door width 2 ft. 2 in.; Height of opening 6 ft. 8 in.; or 7 ft. Fits other sizes and shapes of closets.

NEW!

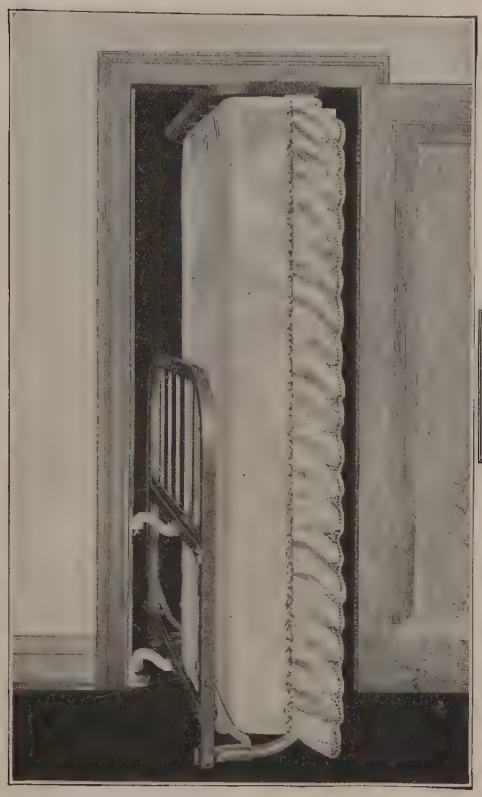
A Type of Concealed Bed (No. 63) That Possesses Unique Advantages

The use of this bed gives an entirely new flexibility to the arrangement of closets for concealed beds, making it most desirable for small apartment or residential use where closet space is limited and rooms are small.

The architect is greatly assisted in planning the bed-closet arrangement because of the flexibility of this new pivot bed and the small amount of space required, as it operates in a recess type closet having an opening 5′ wide and a depth of 18″ from inside of doors to baseboard.

This bed can be lowered as an ordinary recess bed, as a rollout recess bed with the head end entirely out of the closet, or it can pivot either to the right or left almost parallel with the side wall and can be lowered in any position between these points. The pivot feature makes possible a much wider range in the planning of floor space and facilitates the placing of furniture.

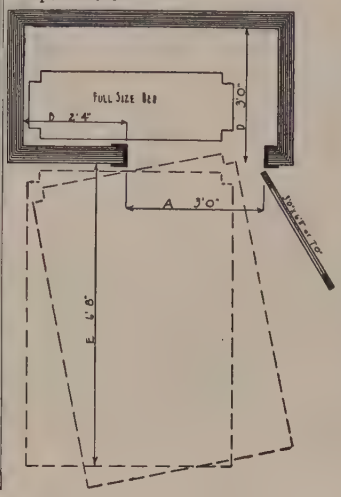
CONCEALED BED CORPORATION, 58 E. Washington St., Chicago



Illustrating the Holmes Piv-A-Dor Bed No. 55 swinging out of the closet thru a single door on two pivoting arms. The lower arm rests solidly on the floor and carries the full weight of the Bed.

A—Door Opening 3'0" x 6'8" or 7'0".

The Holmes Piv-A-Dor Twin Beds No. 55 requires 2—2'4" doors, pockets 1'7", depth 2'7".



The NEW Holmes Piv-A-Dor Bed
The Last Word in Comfort and Simplicity

Remarkably Efficient Construction

Note how the one-piece foot control rod quickly and positively operates the foot end as the bed is lowered into sleeping position. See those malleable mattress clamps which hold all bedding securely—altogether impossible for the bedding to slip when the bed is up-ended. The Holmes Piv-A-Dor is so constructed that the most casual observer is quickly convinced of its easy operation.

One-Piece Head—a Big Feature

A very important feature of the New Holmes Piv-A-Dor Bed is the one-piece head construction. It eliminates considerable mechanism and greatly improves the appearance of the bed. Women appreciate this type of construction not only for its appearance, but because of its complete safety.

Other important structural advantages are the special 1½ inch square seamless welded tubing used in head and foot end, and rectangular fillers ½" x 1½". Sleeping length of this bed is 6'2" or 6'4" as desired.

Good Springs Provide Perfect Rest

The Holmes Piv-A-Dor Bed is unequalled for sleeping comfort. This is primarily due to the specially constructed helical top coil springs which are standard equipment on all Holmes Piv-A-Dor Beds. They make completely restful sleep a certainty.

Easily Concealed—Effortless Operation

The New Holmes Piv-A-Dor is so constructed that any standard three-foot single door provides perfect concealment. This is doubtless its most important feature from a structural standpoint. It occupies little space when not in use, and remarkably little when in sleeping position—in fact, 486 square inches less than any similar bed. The Holmes Piv-A-Dor Concealed Bed is supported by a single pivot in the floor and swings freely at the jamb. It is so perfectly balanced and so well provided with strong bearings that merely the touch of a finger will easily swing it around through a single door opening. All the weight is carried on the floor, a form of construction that insures long life.

Many Attractive Designs

This new model Holmes Bed is available in a variety of attractive designs for head and foot ends, including color schemes harmonious with room furnishings. Makes a really handsome addition to any room.

Let Holmes engineers give you the entire story of this new addition to the complete Holmes Concealed Bed line. Regardless of your construction problems, they can help you find the most profitable solution.

Holmes Two-Door Pivot Bed (Model No. 45)

Both closet doors are always closed. Hinged doors can be opened or closed, when bed is in sleeping position, **allowing free access to closet;** when closed **prevents any draft on sleeper.** It may be installed either with or without the steel standard bar, eliminating all strain on door. When steel standard bar is used it **carries the weight of the bed and door,** permitting the use of French or mirrored doors, and making a perfect installation from a practical and engineering standpoint. Doors of any thickness can be used.

If steel standard bar is not used, specially designed steel angles are fastened across the door where they cannot be seen. Doors 1¾ inches thick are then required. If pivot bed without steel standard bar is used, two 2 ft. 6 in. doors may be used for full size bed.

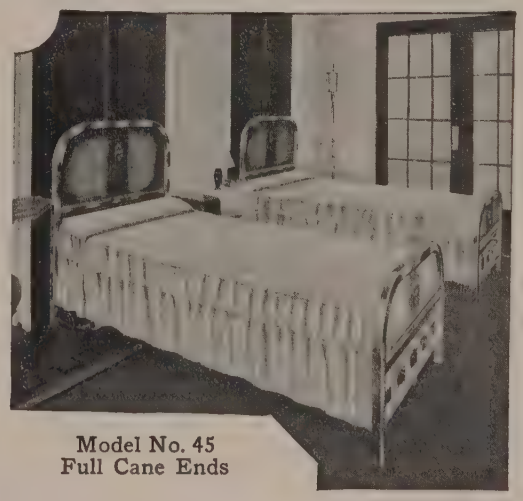
Model No. 45

An exclusive feature of all Holmes Pivot Beds is that they are easily adjusted without removing bed from opening, thus avoiding extra expense if building settles. When bed is open all four legs rest firmly on the floor—another Holmes feature.

Closet space required on full size bed: Depth 24 in. inside of door to plaster (in clear); opening height 6 ft. 8 in. or 7 ft., using two 2 ft. 8 in. doors.

Holmes Twin Pivot Beds (9 ft. Opening)
Model No. 45—Full Cane Ends

This twin bed installation illustrates the beautiful effects that can be secured by using Holmes Concealed Beds. These beds are equipped with a full coil spring and use the steel standard which carries the combined weight of door and bed. The center panel or door serves as the access door, and as will be noted from the cut, all doors may be closed when the beds are in use, in this manner eliminating all draft over the beds, as well as the unsightly appearance of an open dressing room. Mirrored doors may be used if they are preferred, in fact, any type of door or panel. If panels are wanted, they can be carried out with similar effect of wall paneling. With this installation, regardless of the position of the beds, access to bath or dressing room may be had at ALL TIMES.



Model No. 45
Full Cane Ends

CONCEALED BED CORPORATION, 58 E. Washington St., Chicago

LEONARD CLEANABLE REFRIGERATORS

Made by LEONARD REFRIGERATOR COMPANY

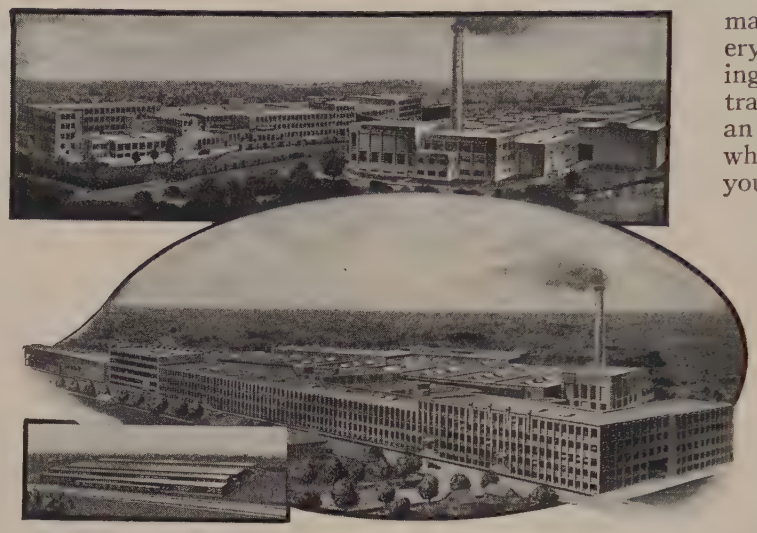
CHICAGO, ILL.
American Furniture Mart
666 Lake Shore Drive

GRAND RAPIDS, MICHIGAN

NEW YORK, N. Y.
One Park Avenue

The World's Largest Refrigerator Factory

Located in Grand Rapids, the production center of the finest household furniture. The most improved woodworking machinery, metal presses, welding devices, and porcelain fusing furnaces, plus capable engineers and skilled cabinet makers, insure the most efficient refrigerators at the lowest cost. How all metal is made rustproof for all time, how the porcelain is made, how doors are made air-tight, and every other manufacturing operation is illustrated and described in an interesting booklet which will be sent to you upon request.



The Leonard factory and yards cover 26 acres of ground—nearly a million square feet of floor space, as illustrated in the top picture.

Another view of the main buildings is shown in the oval illustration.

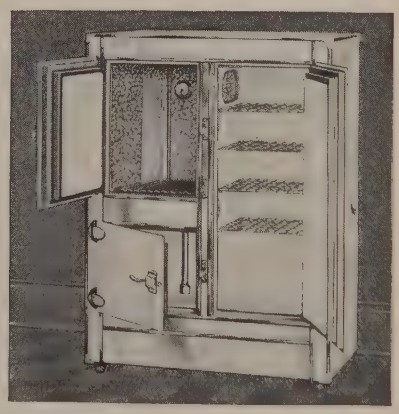
The new porcelain plant (small bottom picture) is 250 feet wide by 420 feet long.

White Porcelain Linings
Thick Corkboard Insulation
Ice or Electric Refrigeration

A Style and Type for
Every Need and Purse
A Wide Choice of Finishes

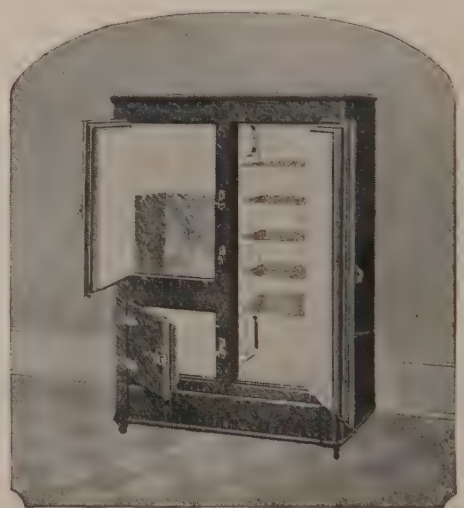
All Porcelain

Gray and white porcelain exterior. One-piece seamless white porcelain interiors with rounded corners. Two inch solid pressed corkboard insulation snugly fitted and sealed in sturdy wood frame, two and one half inch corkboard in doors. Strong ply-wood walls and doors fitted with double air-tight gaskets. Hinges and self-closing latches are nickel plated brass. Nickel plated copper waste pipe and patented trap. Porcelain ice chamber fitted with galvanized steel shield and unusually strong removable ice rack. Bushings in ice chamber make electric installation convenient at any time.



Special All Porcelain

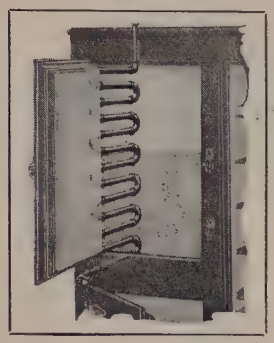
Both exterior and interior are Leonard high grade porcelain on Armco Iron. Outside corners trimmed with bright aluminum. Insulation is corkboard and Balsam Wool plus a confined air space. Corkboard is one inch thick and Balsam Wool is one-half inch thick. There is an air-tight rubber gasket about each door. Special tinned wire shelves, extra heavy ice rack, nickel plated copper waste pipe and trap are standard equipment. Nickel plated brass hinges and self closing latches. Hanger bolts for electric installation in ceiling of ice chamber.



Oak Porcelain

Outside cabinet of oak with quarter sawed veneer finished in gloss varnish. Chamber lined with Leonard Cleanable Porcelain in one piece with rounded corners. Doors fitted with double air-tight gaskets. Walls insulated with two-inch pressed corkboard, and sealed between odorless asphalted paper. Nickel plated brass hinges and self-closing latches. Nickel plated copper waste pipe and patented trap. Heavy tinned wire shelves and heavy galvanized iron ice rack. Galvanized shield for ice chamber. Bushings in ice chamber to facilitate electric installation at any time.

LEONARD REFRIGERATOR COMPANY, Grand Rapids, Michigan

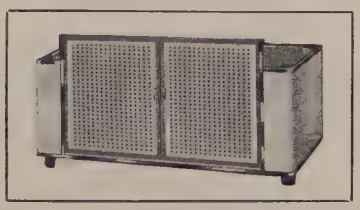


Water Coolers

Two types of water coolers are available. The coil water cooler is intended to be connected with the city water supply. The cup coil cooler is for use with an inverted water bottle, but can also be attached to the city supply. Both are equipped with faucet and both may be installed either at the back or side of the ice chamber. The coil is made of galvanized iron and in various sizes to fit any refrigerator.

Outside Icing

Various Leonard models with outside icing door are carried in stock. Full particulars on any style furnished on request.



Detachable Bases for Electric Installations

Bases supplied to harmonize with the refrigerator. Raises refrigerator twenty inches and gives whole structure appearance of single cabinet. Swinging, metal cane ventilated doors make storage space for uncooked vegetables etc. where electric machinery is installed in basement.

Measurements of Refrigerators

All Porcelain

No.	Width In.	Depth In.	Height In.	Ice Capac. Lbs.	Provision Space Sq. Ft.
0763	34	21	61¾	75	8.65
0764	35⅝	21	66	100	10.57
0462	32½	19¼	44	50	5.93
0463	34	21	47½	75	8.65
0464	35⅝	21	51½	100	10.57
0466	39¼	23⅛	54½	150	13.40
0467	41⅞	23⅛	56⅜	175	14.73
0468	45¼	24⅝	60⅜	200	20.1
0669	61¼	24⅞	61¾	225	24.72

Special All Porcelain

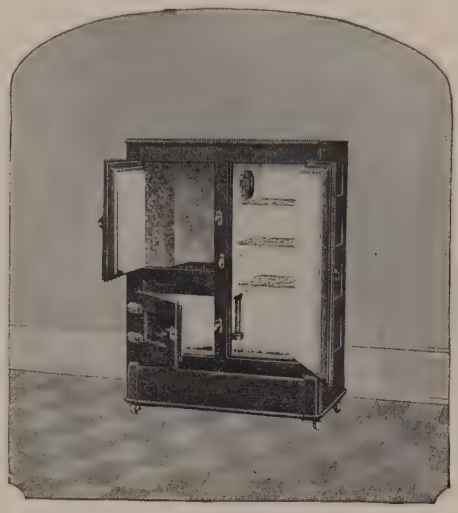
No.	Width In.	Depth In.	Height In.	Ice Capac. Lbs.	Provision Space Sq. Ft.
0432	32½	18¾	41¾	50	5.78
0433	33⅜	20⅝	47	75	8.36
0434	33½	20⅝	51	100	8.35

Oak Porcelain

No.	Width In.	Depth In.	Height In.	Ice Capac. Lbs.	Provision Space Sq. Ft.
3463	34⅝	21½	47⅞	75	8.65
3464	36⅛	21½	52⅛	100	10.45
3466	39⅞	23½	55⅛	150	13.60
3467	42½	23½	57	175	14.70
3468	45⅞	25⅛	61	200	20.
3669	62½	24⅞	62¼	225	24.72

Ash Porcelain

No.	Width In.	Depth In.	Height In.	Ice Capac. Lbs.	Provision Space Sq. Ft.
4452	33½	19	42	50	6
4453	34½	21	47¼	75	8.36
4454	34½	21	51¼	100	8.36
4456	39¾	23½	55	150	13.13
4457	42⅝	23½	57	175	14.18



Polar King

Two types. First, Polar King porcelain lined, corkboard insulated refrigerator in three sizes for 50, 75, and 100 pounds of ice, and, second, eleven other Polar King models without corkboard and porcelain but lined with galvanized steel finished in white enamel. Air tight space between outside wood wall and interior lining, confined with layers of wool felt and asphalt sheathing, and vertical studding strips reinforcing walls and breaking up insulating air space. Nickel plated brass hinges and self closing latches. Golden Oak cabinets. Shelves, ice rack, waste pipe and trap also included.

Measurements of Refrigerators (Cont.)

Steel-Klad

No.	Width In.	Depth In.	Height In.	Ice Capac. Lbs.	Provision Space Sq. Ft.
2253	25⅛	19⅜	48	75	6.82
2254	29⅛	19⅜	48	100	8.08
2452	32½	18¾	41¾	50	6.44
2453	33½	20⅝	47	75	8.82
2454	33½	20⅝	51	100	8.88

Frost-Cold

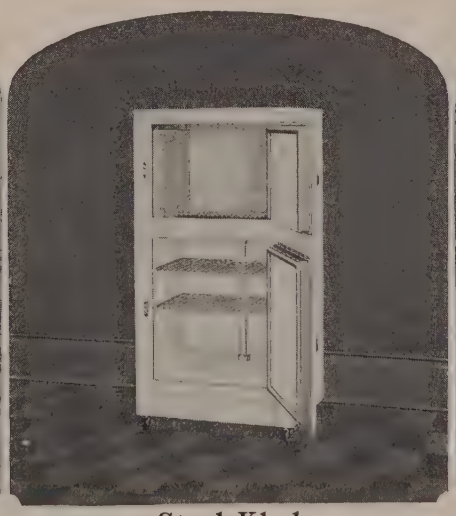
No.	Width In.	Depth In.	Height In.	Ice Capac. Lbs.	Provision Space Sq. Ft.
7242	21	17½	48	50	4.75
7243	26⅛	18¼	48	75	6.44
7244	30¼	18¼	48	100	7.65
7441	27	17⅝	40	25	5.15
7442	32½	17⅝	41	50	6.50
7443	33½	19⅝	46	75	8.79
7444	33½	19⅝	50	100	8.80
7445	33⅞	21¼	50	125	9.86
6442	32½	17⅝	41	50	5.78
6443	33½	19⅝	46	75	8.23
6444	33½	19⅝	50	100	8.23

Polar King

No.	Width In.	Depth In.	Height In.	Ice Capac. Lbs.	Provision Space Sq. Ft.
5442	31½	17¼	41⅞	50	4.74
5443	31¾	19	43¾	75	5.47
5444	33	20¾	48	100	7.67
7011	21	14½	40⅛	25	2.46
7012	23⅜	17⅝	45	50	5.31
7013	27	17¾	46¼	75	6.16
7014	30	18½	48½	100	7.45
7212	21	17½	48	50	4.75
7213	26⅛	18¼	48	75	6.44
7214	30¼	18¼	48	100	7.65
7421	27	17⅝	40	25	5.15
7422	31 7/16	17 7/16	43 1/16	50	6.90
7423	33½	19⅝	46	75	8.79
7424	33½	20¼	50	100	8.82

Ash Porcelain

Heavy ash ply-wood exteriors veneered with oak and golden oak finish. Beautiful flush type doors and ends. One-piece white porcelain linings with rounded corners. One and one-half inch solid corkboard insulation sealed between odorless asphalted felt. Air tight rubber gasket on each door. Nickel plated brass hinges and latches. Nickel plated copper waste pipe and patent trap. Heavy tinned wire shelves and heavy galvanized iron ice rack. Equipped with bushings in ice chamber ceiling to facilitate electric installation in case it is desired.



Steel-Klad

Exteriors of Parker Rust Proof Steel, white enameled. Enameled heavy galvanized metal linings. One and one-half inch solid corkboard insulation with odorless asphalted sheathing within sturdy wood frame. Air tight rubber gaskets on doors. Nickel plated brass hinges and self-closing latches. Nickel plated copper waste pipe and patented trap. Heavy tinned wire shelves and unusually strong galvanized iron ice rack. Two sizes with two doors for 75 and 100 pounds of ice. Three sizes of three door type for 50, 75, and 100 pounds of ice.

Frost-Cold

Cabinets of ash and oak with veneered flush type doors. Finish, Golden Oak. Three have porcelain linings and eight have white enamel linings. One inch solid corkboard wall sealed with odorless asphalted sheathing. Each door has an air tight rubber gasket. Standard equipment includes nickel plated hinges and latches, top bearing casters, baseboard that lifts up, removable shelves, waste pipe and patented trap, and removable ice rack. Top icers and side icers, two door and three door models. Shipped completely equipped, ready to set up and ice in the home.

LEONARD REFRIGERATOR COMPANY, Grand Rapids, Michigan

Servel Electric Refrigeration

...for modern homes and apartments

SERVEL
Electric Refrigeration

Servel Sales, Inc.

Factory and General Offices:
EVANSVILLE, INDIANA

Administrative Offices:
51 E. 42nd Street, New York, N. Y.

CHICAGO
DALLAS
DENVER
LOS ANGELES
SAN FRANCISCO
SEATTLE

Modern

Completely modern in every particular, the new line of Servel electric refrigerators provides a group from which it is easy to select the right equipment for every home having electric service. Good design, the best of materials and skilled workmanship combine to give these electric refrigerators sound reliability. And through the use of recent developments in the application of cabinet finish, servels are as modern and enduring in their appearance as they are in performance.

Colors

By means of a process exclusive with Servel, modern color effects are now available in all Servel cabinet models. In addition to a specially developed white lacquer finish, Servel color options include Biscay Blue, Ivory Tan, Silver Grey and Crystal Green. From this variety you will find it easy to choose a color to harmonize with even the most modern of kitchen interiors.

Cabinet

With its trim lines, its pleasing proportions and its rounded corners, the Servel cabinet is one to justify the owner's pride. The enduring exterior finish makes cleaning a simple matter, too. Heavy corkboard is used as insulation, in all Servel cabinets, and its generous layers keep cold in and heat out.

The food storage compartments are lined with vitreous white porcelain. This provides the most sanitary surface, easy to clean. Model numbers of Servel Electric Refrigerators indicate the capacity of the various types, in cubic feet of food storage space. Thus the H-5 has five cubic feet of space; the S-7, seven cubic feet, etc.

Refrigerating Unit

Compactness and reliability characterize the Servel refrigerating units. Not only may these units be relied upon to do their work thoroughly and regularly; they can be depended upon to do it economically as well.

Perfected control and steady temperature tend to reduce the frequency with which the motor starts and stops. This cuts down the power cost, since frequent starting consumes a great deal more electricity.

In all Servel Electric Refrigerators, methyl chloride is used as the refrigerant. Methyl chloride is the coldest household refrigerant and its use is another contributing factor to the economy and reliability of the Servel refrigerating unit. Servel units are readily adaptable to remote installations—either single or in multiple.

Institution Behind the Product

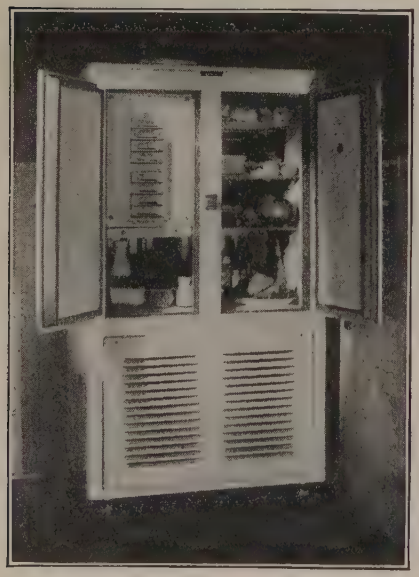
Servel Electric Refrigerators are built by one of the oldest concerns in the industry, an organization of integrity and experience. While many Servels installed years ago are giving satisfactory service today, the Servel you buy today embodies improvements which give it new economy and freedom from adjustment.

Expert Installation

To the present or prospective home owner, the architect and the builder, Servel engineers issue an invitation to consult with them on any problem touching on the selection and installation of Servel refrigeration equipment. At your disposal will be placed the data gained from years of practical study of refrigeration problems. It may be interesting to note, too, that this experience is not confined to residence refrigeration, for the Servel line includes large commercial equipment such as special types of refrigeration for stores, clubs, restaurants, hotels and hospitals; and new Servel water coolers for factories, stores, showrooms and offices.

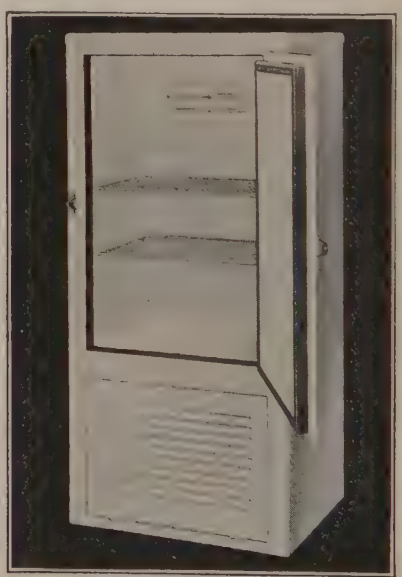
Please address all inquiries to Evansville, Indiana, where they will receive prompt attention.

The S-7 Servel has a food storage space of 7 cubic feet. Exterior dimensions are: 36¾" wide, 26⅝" deep, 65¼" high (including casters). 96 ice cubes are made at one freezing.



The S-10 Servel provides a food storage space of 10 cubic feet. Exterior dimensions: 42½" wide, 27½" deep, 70¼" high (including casters). 120 ice cubes are made at one freezing.

The H-5 Servel has 5 cubic feet of food storage space. Exterior dimensions: 26⅜" wide, 19½" deep, 56" high. Forty-eight ice cubes are made at one freezing.



SERVEL SALES, Inc., Evansville, Indiana

DRAFTING AND SURVEYING SUPPLIES

Drawing Materials—Builders' Levels—Blue Prints

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Drafting Furniture

Drawing Tables in many styles and sizes—stools, filing cabinets, etc. Well constructed and neatly finished. We have a complete line of Drafting Furniture and supplies that will meet your need.

The Utility Folding Stand

Adapted for builders for use on the job. It can be folded and placed out of the way when not in use. Made of hardwood and is adjustable in height from 28 to 36 inches.

No. 4430. Utility Folding Stand.

No. 4430-5. Utility Folding Stand with drawing board, size, 23 x 31 in.

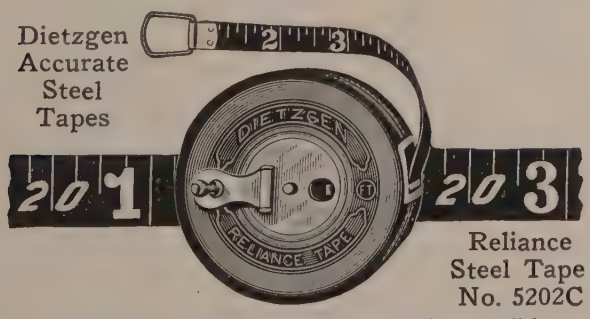
The Ideal Drawing Tables

Strong, rigid, and well constructed of hardwood, neatly finished. Has a well seasoned white pine drawing board top. Adjustable in heights from 32 to 40 inches, and top can be tilted to any angle.

No. 4440-6. Ideal Drawing Table with board, size, 31 x 43 in.

Drawing Materials and Instruments

Dietzgen has a complete line of drawing materials and instruments—drawing paper, tracing cloth—ink, triangles, scales, T Squares—everything for the draftsman, and a wide selection to meet any need.

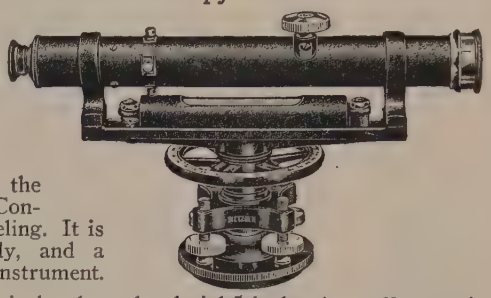


A steel tape which has accuracy, wearing qualities, and quick reading figures—foot mark is shown in a different size and shape figure before each inch mark. Has a steel lined hand sewed leather case, with push button handle.

Builders' Instruments

The Builder's Level is being widely used by successful builders as the best, most accurate, and least expensive means for laying out building sites, determining levels for excavations and fills, and for accurately locating elevations for foundations, piers, and abutments.

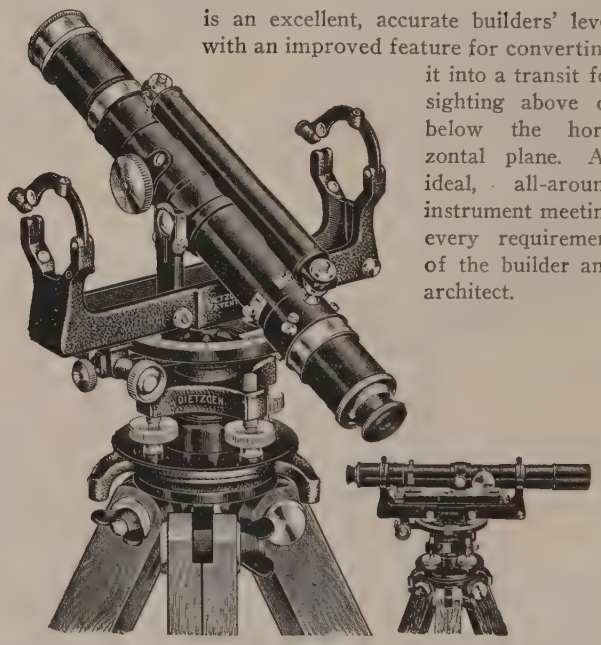
The No. 6370 Builder's Dumpy Level



Is exceptionally well made and very reliable, and meets every requirement of the Builder or Contractor for leveling. It is accurate, sturdy, and a very reliable instrument.

Telescope, 12 inches long, level vial 5 inches long, 60 seconds sensibility, 3½ in. horizontal circle, vernier reading to 5 minutes.

The No. 6381 Builder's Convertible Level



is an excellent, accurate builders' level with an improved feature for converting it into a transit for sighting above or below the horizontal plane. An ideal, all-around instrument meeting every requirement of the builder and architect.

The telescope is 12 inches long, magnifying power 25 diameters, 60 seconds sensibility, telescope level 5 inches, vernier reading to 5 minutes.

No detachable or loose parts; the "Disappearing Standard" holds the telescope in any position. The conversion from a level to a transit and vice-versa is easier than any other instrument—simply lift the telescope from the wyes, lift the standards until they snap into position, then place the telescope in the standards and the instrument is ready for vertical sighting.

EUGENE DIETZGEN CO., 166 W. Monroe St., Chicago, Ill.

DRAWING TABLES AND STANDS

Made by THE FREDERICK POST COMPANY

Main Offices and Factory
Hamlin and Avondale Aves., CHICAGO

Distributors in All Cities

DRAWING TABLES AND STANDS

All styles of Post's Drawing Tables are of standard construction; and are interchangeable throughout.

No. 2275

Norwood Drawing Table

Post's "Norwood" Drawing Table No. 2275 is well known for its unusually sturdy construction and ease of adjustment to any desired angle.

The Top is made of select, dry, pine wood; the stand of well seasoned, shellac finished oak.

No. 2264

Adjusto Drawing Stand

Post's "Adjusto" Drawing Stand No. 2264 is ideal where space is limited. It is adjustable to six different angles and when not in use occupies a space of only 6½x40 inches.

This compact, fully adjustable drawing stand is strongly made of well seasoned selected hardwood and will give many years of useful service.

No. 2311B

Primo Drawing Table No. 2311B

Post's "Primo" Drawing Table is especially desirable when economical utilization of floor space is necessary.

The sturdy, all-iron base gives a very strong and firm rest regardless of the position of the top. The Top is made of selected, white pine.

No. 2268A

Jefferson Drawing Table

Post's "Jefferson" Drawing Table No. 2268-A is of simple but very strong construction. Fully adjustable by means of spreading or closing legs. All Jefferson Tables equipped with drawer; lock extra.

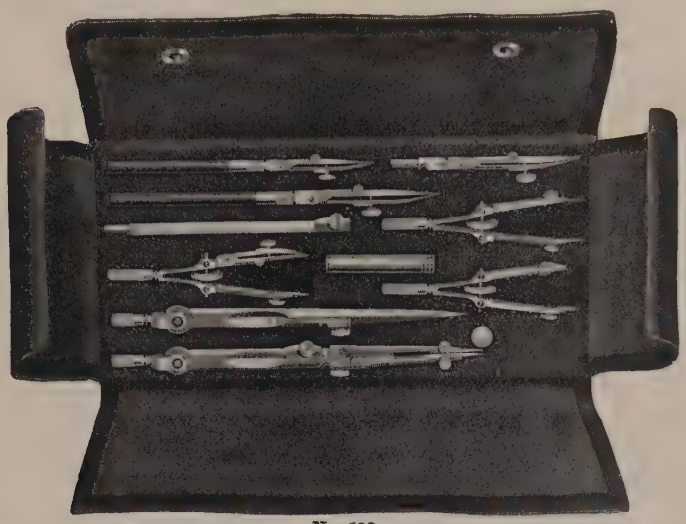
THE FREDERICK POST CO., Hamlin and Avondale Aves., Chicago

No. 2422

Post's Waterproof Black Drawing Ink

Post's Waterproof Black Drawing Ink is smooth, free flowing and absolutely waterproof. When dry, color washes can be applied with safety.

We also carry a complete line of colored inks which are noted for their uniformity and unusually brilliant tones.



No. 628

Post's complete line of Drawing Instruments will meet every requisite of the Architect, Engineer or Contractor. Full information on any grade (in sets or loose) will gladly be sent upon request. The above illustration shows our handmade Primo Set No. 628 which is especially adapted for the use of the most discriminating draftsman.

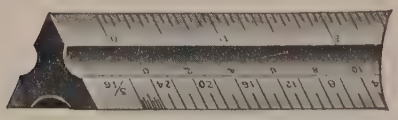
No. 1742

Post's Triangles are made in a large variety of styles and sizes of transparent verdoid and celluloid, including lettering, roof pitch and embankment Angles. The above illustration shows No. 1742 especially suitable for profile and cross section work.

No. 3467

Post's Architects Rod No. 3467 is 6 feet in length, opening to 12 feet. Each foot is divided into feet, inches, and ⅛ inches. Full information on other rods upon request.

Post's Tee Squares are manufactured in our own factory and are fully guaranteed for quality and dependability. Made plain or with transparent edges, with fixed or swivel head, in a wide variety of grades. The above illustration shows our No. 1839. Transparent, amber lined, Maple Blade, with Ebonized Head.



Post's Triangular Boxwood Scales No. 1301 are made of the finest quality boxwood. They are machine divided and are made with the same degree of accuracy as the highest grade white edge scale. Made in 6-inch and 12-inch sizes and in regular shape only.

Post's Drawing and Tracing Papers

Post's Drawing and Tracing Papers are offered in wide range of weights, finish and grades. There is one to suit your special requirements. Samples sent on request.

THE FREDERICK POST CO., Hamlin and Avondale Aves., Chicago

Koehring Construction Mixers

Manufactured by KOEHRING COMPANY

MILWAUKEE, WISCONSIN

Sales Offices in all Principal Cities
Division of National Equipment Corporation

Pavers, Mixers, Subgrade Planers—Gasoline Shovels, Cranes, Draglines, Bar Benders, Bar Cutters

5S Dandie Mixer

The 5S Dandie is a dependable mixer of staunch construction and exceptionally fast operation. Designed to serve the building contractor in all concrete work where a mixer of one-bag capacity (1-2½-4) is the desired size, it is especially adapted to the yardage required and frequent moves necessary in home building work.

In foundation work and footings, pouring walls, floors and sidewalks, where each job is short and frequent moves are necessary, the Dandie makes a big saving in time. With rubber tires, disc wheels, three point suspension type of front axle and narrow frame it is easily and quickly moved. Just hitch the Dandie to your car or truck and you are soon ready for the next job.

The 5S Dandie is powered with a single cylinder gasoline engine and may be furnished with charging skip or low charging hopper and platform.

5S Dandie on Home Building Job

The Koehring Dandie is also built in the 7S and 10S sizes which have the sturdy construction and extra-yardage speed characteristic of all Koehring mixers. They may be equipped with either a two or four cylinder gasoline engine, low charging hopper and platform or power charging skip.

Profit-Making Features

The gears of the power transmission unit are completely enclosed and operate in oil. The combination flexible coupling and disc clutch, which are connected to a nickel steel worm shaft, are other units designed for long service life.

Long bearings between the drum rollers assure ease in operation and eliminate unnecessary wear.

14S Heavy Duty Mixer for the Larger Building Jobs

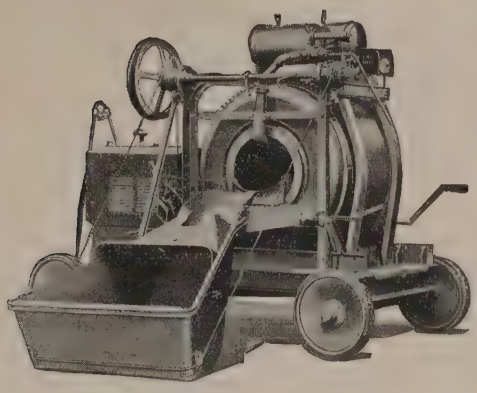
For the larger building jobs where the yardage of concrete demands a bigger mixer, the Koehring Heavy Duty 14S is a most practical machine.

Like the Dandie mixers, the 14S may be equipped with rubber tires for quick moving. Its compact construction with narrow frame and narrow drum permits short turning in tight places.

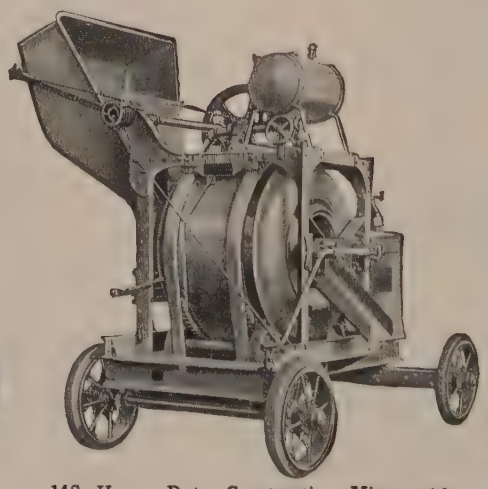
Drum-end control allows one man to operate every control lever of the 14S mixer from the drum end, where he has both charging and discharging operations in full view. This means seconds saved on every batch.

Additional Sizes of Construction Mixers

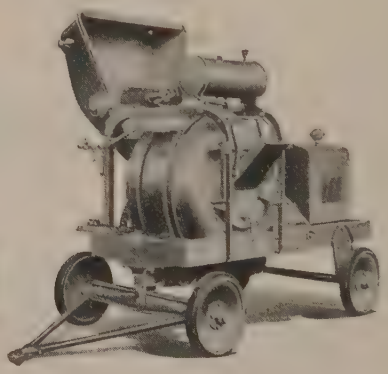
Catalogs and specifications of the Dandie mixers and also of the larger Heavy Duty construction mixers Nos. 14S, 21S and 28S, will be sent upon request.



10S Dandie, a two-bagger with a batchmeter and drum-end control



14S Heavy Duty Construction Mixer with drum-end control



7S Dandie, a sturdy mixer, easily portable

KOEHRING COMPANY, Milwaukee, Wisconsin

SMITH CONCRETE MIXERS

Made by THE T. L. SMITH COMPANY

Division of National Equipment Corporation

1066 32nd Street, MILWAUKEE, WIS.

Sales Offices and Service Stations in All Principal Cities

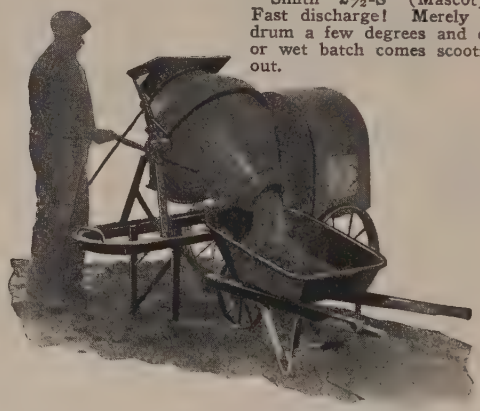
Products: Smith Tilting Mixers—2½-S, 3½-S, 5-S, 7-S, 10-S, 14-S, 21-S, 28-S, 40-S, 56-S, and 112-S; Smith Non-Tilting Mixers—5-S, 7-S, 10-S, 14-S, 21-S, and 28-S; Kwik-Mix Concrete, Plaster, and Mortar Mixers.

Smith 3½-S Tilter—Big wide feed chute, only waist high, provides faster and easier charging.

SMITH Mixers have been built since 1900, and are used by contractors, large and small, the world over. Because of their correct design and thorough dependability, the large models are used for pouring the world's greatest projects, Muscle Shoals, Conowingo Dam, Cascade Tunnel, etc. And the smaller sizes are built identically the same as the big Smiths.

The Smith Mascot has a capacity of 25 to 45 cu. yds. per day and is ideal for the small job and repair contractor. It is light enough to be drawn along the forms or easily towed from job to job—has an easy, one-hand tilt that can be operated from either side of the mixer—a 1½ h. p., high quality engine—and an electric welded steel drum turning at 15 r.p.m. Choice of two steel truck wheels, or wheels for Ford 30" x 3½" pneumatic tires. Capacity—2½ cu. ft. per batch—a full wheelbarrow load.

The 3½-S Tilter also has fast mix and discharge and produces 35 to 50 cu. yds. of concrete daily. It is the smallest Smith on which a power loader is supplied. Power loader speeds up production 30 per cent. Has 1½ h. p. engine when equipped with feed chute, weight 1270 lbs.; 2½ h. p. if loader is used, weight 1730 lbs. Choice of four steel wheels or two clincher wheels for 30" x 3½" Ford tires.

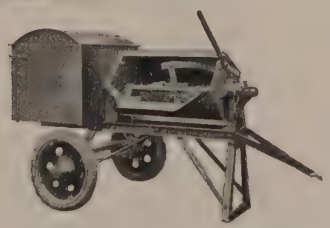


Smith 2½-S (Mascot)—Fast discharge! Merely tilt drum a few degrees and dry or wet batch comes scooting out.

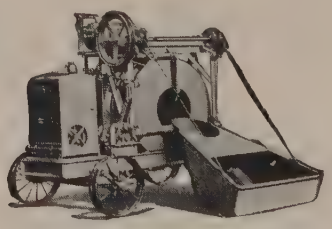
The complete line and the famous Smith "end-to-center" mixing action are fully described in catalog 528—gladly sent on request.

KWIK-MIX CONCRETE MIXER

Kwik-Mix 3½-S Tilting Mixer—half-bag trailer type—spring mounted—roller bearings throughout—friction brake—a husky low cost unit—capacity 35 to 50 yards per day.



Kwik-Mix 3-M Plaster Mixer—trailer type—equally well adaptable for mixing mortar, plaster, or stucco on small building jobs—spring mounted axle—roller bearing, cushion tired wheels—3 ft. capacity.



Smith 7-S Non-tilter—One bag capacity up to 1-3-6 proportions—Will turn out 75 to 120 cu. yds. concrete daily. Equipped with low charge hopper or power loader.

THE T. L. SMITH COMPANY, 1066 32nd Street, Milwaukee, Wis.

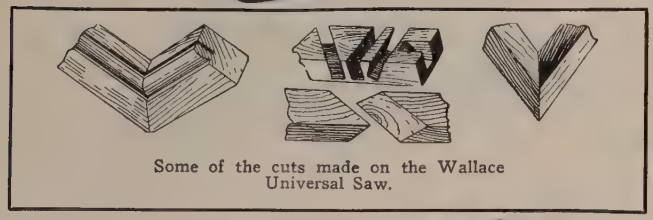
Wallace Portable Woodworking Machines

Made by J. D. WALLACE & CO.
Factory and General Offices:
155 South California Ave., CHICAGO

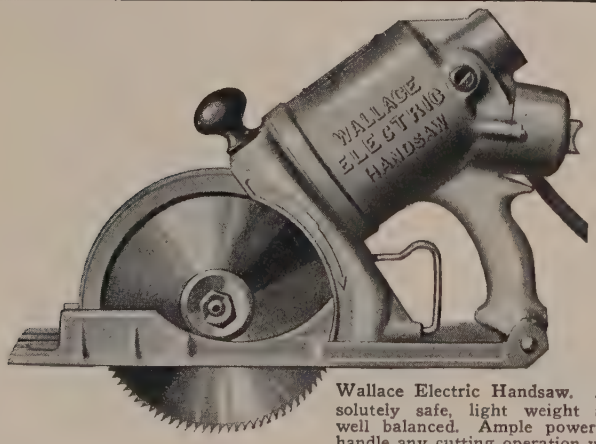
Branch Sales Offices: New York, Boston, Philadelphia, Baltimore, Buffalo, Pittsburgh, Cincinnati, Toledo, Cleveland, Detroit, Milwaukee, Minneapolis, Kansas City, Louisville, Atlanta, St. Louis, Dallas, Denver, Salt Lake City, Portland, San Francisco, Los Angeles, Toronto (Ontario). Representatives in Principal Countries of the World.

Wallace PORTABLE MACHINES
TRADE MARK

Wallace Universal Saw



Some of the cuts made on the Wallace Universal Saw.



Wallace Electric Handsaw. Absolutely safe, light weight and well balanced. Ample power to handle any cutting operation with ease. Approved for safety by Nuwriters Laboratories.

Products:

This company makes a line of Portable Woodworking Machines which can be easily carried from the shop to the job and which will so greatly increase the productive capacity of your carpenters that the savings in wages will quickly pay for the machines, to say nothing of more accurate work. Wherever wood is worked, cut, jointed or turned Wallace Portable Machines will diminish costs and increase production. Twenty thousand contractors are now using them.

Cutting Compound Miter

Workace Radial Saw:

One machine—handles all cutting operations—any angle—compound miters—cutoff—ripping—dadoing—tenoning and routing, shaping, fluting, boring, sanding—practically every operation done in building, shipping, maintenance, or in the yard or woodworking plant.

J. D. WALLACE & CO., 155 S. California Ave., Chicago, Ill.

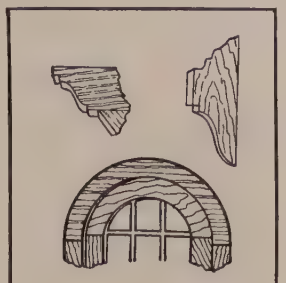
The Wallace Principle:

Wallace Portable Machines are individual machines, each specially designed to do a certain class of work, just as your hand tools are each designed for a special purpose. A combined hand saw and plane would be neither a very good saw nor a good plane and if one workman were using it for sawing, another workman who might wish to use it for planing would have to wait until the first had finished with it.

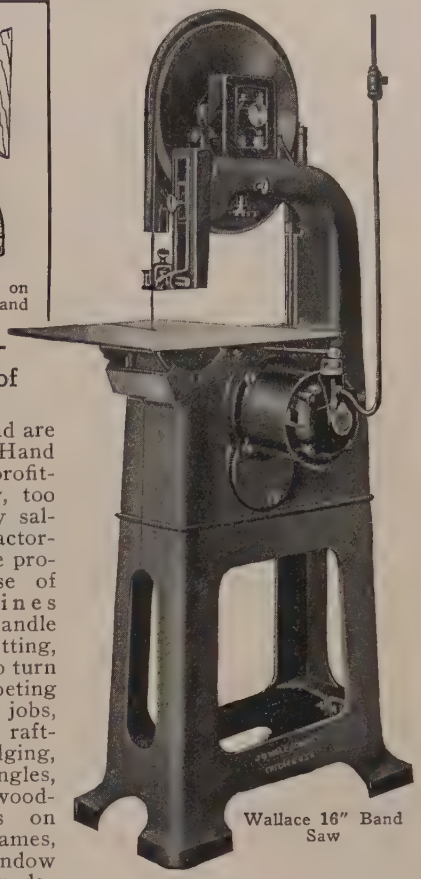
By designing each machine for one class of work only Wallace is able to make a simpler, smaller and lighter machine that will perform in the best possible manner the kind of work it is intended to do. Another important advantage of individual machines is that each can be placed in the location most convenient to the workman who is using it. All Wallace machines can be operated from any electric light socket and two men can easily carry any machine from room to room in the house under construction, keeping the machine close to the work.

Quick Set-Up:

With Wallace Machines different operations are performed merely by a change of saws or cutters—you do not have to remove any part of the machine itself when setting up for various jobs. For instance, in 10 seconds the Wallace 6″ Jointer can be set for a deep rabbet cut. Each machine is direct connected to an individual motor, mounted on frame of machine, insuring a uniform cutting speed. There are no belts requiring constant adjustment to prevent slipping.



Some of the cuts made on the Wallace 16″ Band Saw.



Wallace 16″ Band Saw

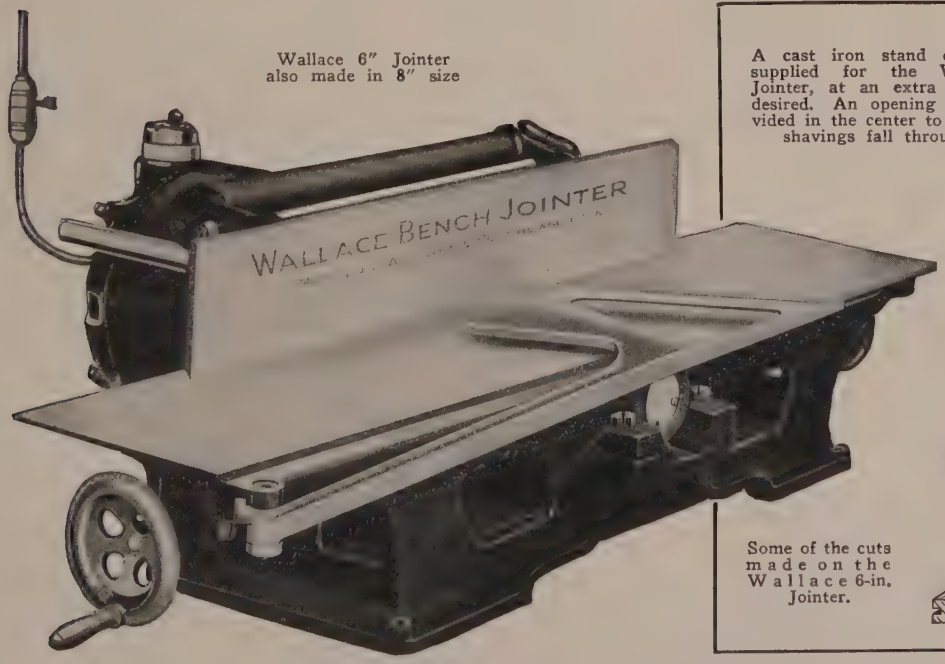
This Is the Age of Machines:

Wages are high and are likely to remain so. Hand work is no longer profitable—it is too slow, too expensive. The only salvation of the contractor-builder is to increase production by the use of labor-saving machines which will not only handle his ripping, cross-cutting, and jointing, but also turn out moulding, rabbeting and irregular sawing jobs, cut concrete forms, rafters, studding, bridging, hip and valley shingles, etc.; perform all woodworking operations on door and window frames, porch and window screens, stair routing, dadoing and case work.

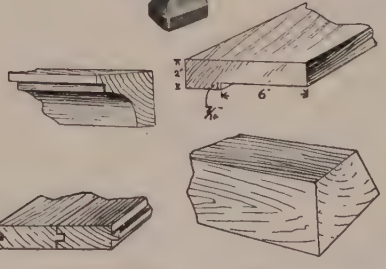
In addition to the machines illustrated we make a 4″ Planer, 6″ Lathe, Mortiser, Spindle, Sander, Disc Sander Thickness Planer and Electric Glue Pots.

Write for complete catalog of Wallace Portable Machines and learn how to cut costs and speed up production on your next job.

Wallace 6″ Jointer also made in 8″ size



A cast iron stand can be supplied for the Wallace Jointer, at an extra cost if desired. An opening is provided in the center to let the shavings fall through.



Some of the cuts made on the Wallace 6-in. Jointer.

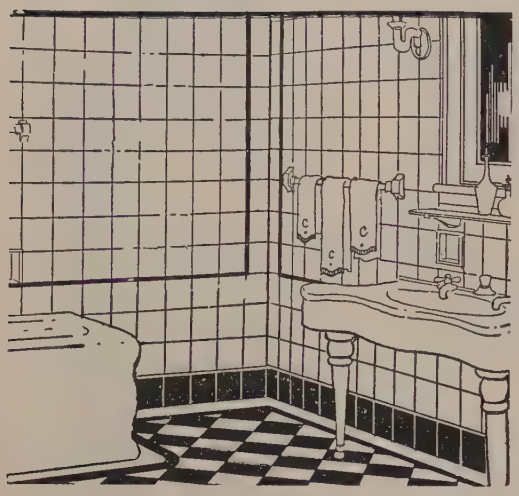
J. D. WALLACE & CO., 155 S. California Ave., Chicago, Ill.

Sheetile—Tile Walls at Wallboard Cost

Made by

HAGER WALL TILE CORPORATION

Lansing, Mich.



NON-POROUS, NON-WARPING, WATER AND MOISTURE-PROOF

Product

SHEETILE—a fibre board, made under a patented process, and which is nailed, sawed and planed the same as lumber.

Purposes

SHEETILE has its place in all types of buildings—garages, office buildings, public institutions, comfort stations, gymnasiums, apartments, hotels, show windows, stairways, entrances, restaurants, barber shops, beauty parlors, doctors' and dentists' offices, dairies and many other places where a permanent, sanitary, easily cleaned and chastely beautiful finish is desired at a low cost of installation and upkeep year after year.

Decreases Building Costs But Increases Sales Value

SHEETILE means a completely insulated wall with a tile finish applied in ONE OPERATION. It is a wall that is absolutely waterproof, non-porous and non-warping. Its glistening finish is obtained, not with paint or varnish, but by a special process of glazing during its manufacture. Because of this process, SHEETILE finish simply CANNOT flake, crack or peel off, therefore it affords a permanent finish—one that will last practically forever. Estimate for yourself the annual saving in re-decorating costs, for example, of the lower walls in a stairway whose constant use requires a refinishing practically every year. Imagine the beauty of such a stairway and the ease with which that cleanly beauty can be maintained the year round merely by wiping with a damp cloth.

SHEETILE is sufficiently elastic to adapt itself to the settling of a new building and will show no unsightly cracks in the corners as does plaster almost invariably. It can be applied over old walls and is ideal for such added rooms as breakfast nooks, sun parlors or bathrooms. A SHEETILE panel extending around the lower walls of a garage produces an effect that is almost unbelievable at a cost surprisingly low. For such purposes as store fronts and show windows SHEETILE is attaining wide popularity.

SHEETILE is easily applied, like wallboard, and any good carpenter can do a thoroughly satisfactory job quickly and at low labor cost. It is sold only through lumber dealers, any one of whom gladly will show it and explain its many advantages and the manner of its application, or we will mail full details and sample on request.

Two Comments Typical of Thousands in Our Files

Townsend-Dailey Co., Inc., Contracting Engineers, Ypsilanti, Mich.:

"We have completed the installation of Sheetile in ten bathrooms of the Beyer Apartments and it meets with the hearty approval of the owner. In substituting Sheetile for porcelain we have effected a very considerable saving and have found the material just as satisfactory."

Alex. J. Groesbeck,
Dime Bank Building,
Detroit, Mich.

"The job of 'Sheetiling' you recently completed in the Blackstone Building for me is very satisfactory. In fact, it is far better than I expected. In appearance and workmanship it certainly has done the trick, and I thought you ought to know about it."

HAGER WALL TILE CORPORATION, Lansing, Mich.

EDUCATIONAL SECTION

Pertinent Facts and Suggestions on Home Construction

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Building the Home

The building of a home should be the subject of deep thought and much careful consideration because the average home owner builds but one home in his life time.

Naturally the home owner wants the house comfortable and convenient to live in. Attractive inside and out. Well located and easy to dispose of should a sale be contemplated at any time.

The choice of a home is a good deal like buying an automobile. Most of us buy not the best automobile made but the one we consider best for the price we can afford to pay. It is the same in building a home.

Many houses that we would like to have cost more than we can afford. The first thing to decide, therefore, is how much you can afford to invest in a home. If your limit is $5,000 or $6,000, then you must make up your mind to do without some of the things you could have in a home costing $10,000 or $12,000.

There is always this advantage, however, in building the less expensive home—it will be easier to sell whenever you are ready to build a more costly one, or wish to dispose of it for any reason.

Remember, there are more people—a great many more—that can afford to buy a $5,000 or $6,000 house than there are families who can buy a $10,000 one.

The possibility that some day you may wish to sell should always be borne in mind. Remembering this, you will build a house that is constructed of thoroughly good, reliable materials so that it will still be in good condition years hence. And, in selecting a design, you will choose one that does not depart too radically from accepted standards. Sometimes, houses that embody ideas that the owner thinks original and highly valuable may be considered freakish and useless by other people. And, houses of this kind are not easy to sell.

Good materials should always be used in building construction. The principal reason for using good materials is that they cost less in the long run than poor materials.

Whenever you are tempted to buy any kind of building material or equipment for the home merely because its price is lower perhaps than materials or equipment of better quality, remember the *real cost* is not what you pay now, but *is first cost divided by years of service.*

For example, roofing that costs, say, $500, and lasts twenty years without renewal, is only costing you $25.00 a year and is a better buy than roofing that costs but $300, but must be renewed at the end of ten years with, perhaps, a repair bill or so before a complete renewal becomes necessary.

Do not try and reduce the cost of the home you build by using poor materials. *It cannot be done*—you simply cheapen the house. And, in the end, you will pay more than if you had used good materials at the start.

If economy is necessary, built a smaller house or omit, for the present anyway, some of the things you would like to have but can do without.

A screened or enclosed porch, or a sunroom are nice things to have in a home, but, where the budget is limited, people often get along without them, temporarily anyway.

It is better and wiser to omit the porch and sunroom (both of which can always be added later) than to try and save money on foundations, walls, roofing, floors, plumbing, heating plant, electric fixtures and equipment. These are the things upon which the wearing qualities and the convenience and comfort of the home depend, and it is false economy to use poor materials, equipment and construction for the essentials, for the sake of having money enough to spend on details and features which, though highly desirable, can be done without until some future time.

With unlimited means, it is easy for one to have a beautiful and distinctive home, but to design a small, moderately priced house that is distinctive from other houses in the neighborhood is something of a problem that has been solved by HOME BUILDERS CATALOG.

Every home builder yearns for a house that is different from ordinary houses. That possesses distinctive features—a house that people will notice and admire. Such a desire is not due to pride alone, but to good judgment, too, for such a house will command a better price, and sell more readily should the owner ever wish to dispose of it.

The Homes illustrated in HOME BUILDERS CATALOG possess to an unusual degree a charm and individuality rarely found in such moderately priced homes. As you turn the pages of the *Plan Section* you will realize more and more that they were designed and planned by men, not only familiar with every kind of building material and the most approved methods of building construction, but responsive to the charm of pleasing proportions, to the appeal of harmonious color combinations, and to that touch of originality that challenges admiration.

Home owners and building contractors alike will find much of interest and helpfulness in the *Manufacturers' Section* of HOME BUILDERS CATALOG.

Here are arranged in logical order, and carefully indexed by name of product, by manufacturer's name and, whenever possible, the trade-mark name, those products that, because of their outstanding quality and well known reliability, should be used in home construction.

These products will prove far more economical in the end because of their quality and wearing ability.

The *Educational Section* will also prove interesting and helpful to anyone interested in home building.

The various articles are based on data received from reliable sources and are carefully written.

Many of the suggestions given will be found exceedingly helpful. And, where it seems desirable to do so, they can be modified to meet individual conditions and preferences.

The publishers of HOME BUILDERS CATALOG are always willing to answer questions concerning any of the homes illustrated in the book and give any information they may have concerning any product that enters into home construction.

An attractive two-apartment house that has the outside appearance of a one-family home.

Modern Bungalow. A home of the small house type that is comfortable and convenient.

American Bungalow showing English characteristics. A very desirable small home.

French Cottage. A suitable, comfortable home for the medium size family.

Determining the Size of the Home and Making the Check List

How large must the home be? This question is best answered by deciding how many rooms are required to meet the needs of the family? How large must each room be? What ceiling height do you want?

Remember, a house has three dimensions—length, depth and height. A room 10 x 10 feet, that adds only 100 square feet of floor space, adds also 100 square feet of ceiling, 320 square feet or more of wall (depending upon the ceiling height) and necessitates additional doors and windows, and additional labor by masons, carpenters and plasterers.

The three principal rooms in the home are generally considered the living room, dining room and kitchen, and it is usually a safe plan to give considerable thought to the layout and size of these three rooms first. Then plan the rest of the house accordingly.

The overall dimensions of the house too will depend to a large extent upon the style of house you will build. Whether it will be one of the many attractive bungalow types, a two-story house, or a two-apartment dwelling.

These things should all be definitely settled in advance because it is both confusing and expensive to make changes after construction has been started.

After your house is thoroughly pictured in your mind and on paper, in the form of rough sketches and memorandums, make a Check List. This will insure against the danger of overlooking any features or conveniences you may want included. By paging through the *Manufacturers Section* you can easily check any item you may have overlooked.

In this way you will be sure that your home will be complete in every way and overlooked items, added afterwards, usually means additional cost and annoyance through the necessary labor to install them.

Selecting the Home Site

No home can be entirely satisfactory unless it is well and conveniently located. Cheap lots usually have objectionable features; that is why they are cheap. You should not pay more than a fair market value for the lot you buy but, on the other hand, if a lot is offered at a price below its true market value, check everything carefully to be sure that there is no objectionable feature that might account for the discrepancy between market value and the seemingly attractive price. If you are not familiar with realty values in the community you are interested in, get the advice and counsel of some one who is.

Before you buy the home site be sure that it is convenient to transportation, schools, churches and the stores that can furnish the food supply. If not, the children may sometimes have trouble going to and from school, your wife may tire of the difficulty of reaching the stores and getting back home again, and you will be inconvenienced in your daily trips to and from business. While the telephone has brought the butcher, grocer and druggist nearer, and the automobile has made distances considerably less, still it is always convenient to have transportation, schools and stores within easy walking distance, particularly in inclement weather.

Remember, too, in isolated locations stores are fewer and prices generally higher. It costs more for transportation and it is more difficult for you to visit your friends and they you.

While a "cheap" lot in an unsettled community may look attractive on a bright, sunny spring day when you drive out to see it in a comfortable car, picture your wife, your children and yourself trudging through deep snow, on a cold day, to get to and from store or school, or from transportation, to your home.

Is the lot improved property, or does the neighborhood lack sidewalks, paved streets, street lights, sewers, water, gas and electricity? If any or all of these things are missing, then to the price you pay for the lot, you must some day add the cost of assessments to cover these conveniences as they come. In the meantime a cistern or well for water, a cesspool, septic tank or chemical toilet for sewage disposal must be provided, and temporarily at least, you must dispense with the convenience of gas and electricity. To do without these things keeps the house from being as convenient and comfortable as a home should be.

The nature of the soil is an important thing. Filled-in ground, where a few feet below the surface you may find ashes, street sweepings, tin cans and all kinds of waste material does not offer a firm foundation for your home, unless you go down to solid soil beneath the fill, and this extra excavating necessarily increases the cost of the foundation.

If the soil is rocky, blasting may be required. Heavy clay soil holds water and drain tiles must be laid beneath the surface to carry off the water away from your foundation.

Ground that is easily excavated and that has good natural drainage is the best site for a home and it is usually wise to consult your building contractor, if possible, before buying the lot. His practical experience and knowledge of the advantages and disadvantages of various soils, from a building standpoint, will be valuable to you.

A lot should be level, generally speaking. Slight irregularities of surface are not objectionable and sometimes prove to be advantageous in assisting drainage, and ofttimes give a pleasing variety to the appearance of the home site when properly landscaped. Deep depressions, that must be filled in, or high portions, that must be leveled, should be avoided on account of adding to building costs.

A not too heavily wooded lot is usually preferable to a bare lot. A few fine old shade trees about a home add greatly to its charm and increase its salability and value. Trees do not grow over night and a lot with some well placed trees on it is little short of a "find."

How is the neighborhood? Do the people already living there seem to be the kind of people you would want for neighbors? Are the surrounding homes attractive and well kept? Are their values in keeping with the value of the home you will build? This is of more importance than perhaps it seems at first glance. In a neighborhood where homes are modern and attractive the individual values of homes are greatly enhanced. And, a good rule to follow is, never build a home too expensive, or too cheap, for the neighborhood where it is located. A $20,000 home in a community of $10,000 homes is often hard to dispose of should you wish to sell later on; and a cheap house, out of keeping with a more expensive neighborhood, is just as hard to sell. Build a home in tune with the neighborhood you select to live in and pick your neighborhood carefully.

The size of the lot required depends largely upon the style and size of house you will build. On a narrow city lot the location of the house is restricted to a small area and about the only question that can arise is how far the house should set back from the street. This is sometimes provided for by local building regulations or by a clause in the deed. In the absence of restrictions it is well to follow the example of your neighbors, locating your front wall in line with the front walls of adjoining houses.

When the lot is a large one the question of locating the house on the lot becomes more important for, of several possible locations, there is always one that is better than any of the others. By driving four stakes in the ground, marking the four corners of the house, and shifting these stakes from one spot to another, it is possible to compare the advantages and disadvantages of each possible site. Sometimes by shifting the house a few feet in one direction or another it is possible to bring some attractive feature of the grounds in line with the windows or to conceal some unattractive feature from view. The slope of the land may influence the selection of the building site because of better natural drainage away from the house, or the presence of some fine old trees that you will wish to preserve, may be a deciding factor in locating the house on the lot. Weigh one thing against another, considering the question from all possible angles, for when once the building operations are begun it will be too late to change your mind.

It is generally unwise to locate the house in the center of a large lot, unless you have a frontage of at least 150 feet. With a 100 foot lot, locate the house on one side or the other, keeping the balance clear for lawns, shrubbery or flowers, which always appear to better advantage when massed than when they are scattered in small patches over the lot. This plan has the further important advantage that you keep intact 50 feet of your lot which some day you may sell at a good profit, thus reducing the cost of your home.

Bearing in mind that every new house erected in a community increases the value of neighboring property, it is well to buy more land than you actually need for your house (if you can afford to do so) so that you will profit by the increased values that the house you build helps to create.

The boundary lines between your own lot and the property adjoining it on either side should be verified by a survey before you begin to build. Do not accept existing fences as boundaries—they are often misplaced. The same survey will establish the bench mark, or grade, of your lot. With the aid of this information the building contractor will know how far below the surface the sewer pipes lie and will not (as has occasionally happened) place the laundry tubs in the basement so low that the sewage sometimes drains into the tubs instead of the tubs draining into the sewage.

No building should be placed nearer than 18 inches to a boundary line—24 inches is better. This is because the roof eaves, window sills, window blinds and sometimes windows (if they are of the casement type and open outwards) project beyond the wall of the building, as do the footings of foundation walls. You must not encroach on your neighbor's property either above ground or below. Much expensive litigation has been caused by failure to observe this simple rule.

Be sure that title to the lot is clear. In most cities verification of title to real estate is now handled principally by title guarantee companies. These companies not only perform all legal work incident to transfer of possession, but guarantee the title to the client. The fee is small, and aside from your own peace of mind, should you ever wish to sell, disposal is much easier when a title is guaranteed by a responsible company.

These are some of the things to consider when selecting a home site. Don't be influenced by price alone. A lot at a few hundred dollars may prove to be less of a bargain than one at two or three times that price. Buying a lot upon which to build a home to live in is an entirely different matter from buying a lot for investment. In the latter case perhaps you can afford to take chances—in the former you cannot.

Selecting the Architectural Style

The home builder of today has a decided advantage over the home builder of a few years ago. No longer is he confined in choice to a few simple types of architecture. Today, there is not a style of house architecture but what has been adapted to the small home field. Spanish Mission bungalows, Italian villas, Tudor and Elizabethan manor houses, and Georgian mansions all have prototypes in the small home field. Nor does this mean that small replicas of large houses have been made. Rather, the architectural principles themselves have been altered and modified to suit the requirements of the small home with the result that the artistry and beauty of all styles can be had in any size house desired.

With such a wide range to choose from the home builder should be exceedingly careful in the selection of the style of architecture for the new home. He should bear in mind first of all his own wishes and base his selection, as far as he can predetermine it, on a type of home that will be permanently satisfying. In other words, if a certain home has caught his eye, he can often advantageously relinquish this momentary attraction in favor of a home that may "wear better." The completed home should be visualized as it will appear in the setting selected for it, and the home builder be governed accordingly. The selection of style of architecture should be arrived at, not only from the outward appearance, but from the interior arrangement as well. Style in achitecture applies to the distribution of space on the inside as well as to the structural and aesthetic values of the exterior.

Most people know what kind of a home they want before they begin to build. Then the next and most important step is to acquaint themselves with the requirements of the style they have chosen. The average person shies from any set rules for building a home, believing that to follow rules means losing the "personal touch." This idea should be corrected, as there is sufficient flexibility in any style of house for the free play of personal taste. Adherence to a style, in general, simply means avoiding confusion and subsequent disappointment in the completed home. If harmony of effect, as well as economy of building, is to be obtained, certain fundamental principles must be known and followed. It is well to remember that no accepted style of architecture is the arbitrary creation of a few people. Rather, its perfection is the result of generations of slow and thoughtful work. Why not take advantage of this experience?

It is easy enough to tell a builder that a certain kind of a house is wanted. But it is safer to carefully plan beforehand. If one is to have the utmost satisfaction and invest money to the best advantage, it is well to decide upon the type of home keeping the following things in mind: kind of materials available (and here the builder of today has a tremendous advantage over the home builder of a few years ago), the setting in which the home is to be placed. This means not only the plot of ground on which the house will be located, but a consideration of the types of architecture of neighboring houses; a style of architecture which is adaptable to the actual living requirements as well as appealing to the eye; the prefiguring of what one's idea of home will be in years to come, for most people do not trade in their homes as they do their automobiles; the keeping of an eye on the appropriation, for it is always true that some types of homes are more expensive to build than others.

On the following pages will be found illustrations and brief descriptions of the most popular styles of house architecture, together with many articles and illustrations treating with various subjects of vital importance to everyone interested in any way in home building. These subjects are so handled that they will prove exceptionally helpful in both a suggestive and practical way.

Colonial

Colonial architecture is more closely associated with American history and traditions than any other type of architecture. A brief review of the famous dwellings to which Americans look with pride will show them to be in one Colonial style or another. So closely has the Colonial home been interwoven with American life that it is only within recent years that a family of culture would consider any other style of home. Nor must we think that all Colonial houses look alike, for in its wide and extensive use different kinds of Colonial styles were developed. Colonial houses flourished in New England, in New York, in Virginia, in the South and in the North under various climates and conditions, and it was inevitable that Colonial architecture should develop along varied lines.

Notwithstanding the close association of Colonial architecture with American home life and the fact that it has taken on various forms, it has one common and foreign source. The style was directly borrowed by the American Colonies from Georgian England, whose architects in turn looked for Greek and Roman models for their inspiration. Knowing this ancestry, it is not difficult to understand the emphasis shown in the horizontal lines, the simple divisions of interior space, the application of classic orders, the comfortable impression of compactness and the exceeding economy of the style. The use of flat pilasters and columns which are part and parcel of the Southern Colonial style have also obviously their classic models. Nor was it a simple task to adapt the cold, monumental architecture of the Greek and Roman public buildings to home use. We have to thank the particular genius of Englishmen of the Georgian period for making this style flexible and warm and at the same time retentive of all of its ancestry. One has only to look at the old Georgian house to prove this.

While the American colonists copied Georgian style in general, they were not content to leave it untouched, and many of the delightful features of Colonial architecture are their innovations. Such accessories as brass knockers, cut glass door knobs, and old gilt mirrors topped with their bold eagles were the devices of our forefathers. The double twist in the newel post, the dark mahogany hand rail and the frequent application of shutters are also American in origin. A comparison of New England and Southern Colonial homes with the pure Georgian houses will help to convey the extent to which Americans have altered and in some ways refined, their original English models. Excepting the architectural principles themselves, there is very little of the old English houses in either New England or Southern Colonial homes.

As has been pointed out, local conditions play a tremendously important part in the shaping of an architectural style. Thus we see two different styles of Colonial architecture in New England, and the South, which are designated as New England Colonial and Southern Colonial. The difference in the climate shows its effect upon the height of ceilings, higher ceilings being required in the South because of the heat. The local supply of material accounts for the fact that New England Colonial homes were almost invariably built of wood while the discovery of excellent beds of clay in Virginia caused brick to become popular there.

The Southern planter, being the wealthier man,

Colonial

indulged in the use of classic orders with greater profuseness, as is evidenced by the colonnade which extended through two stories, an outstanding characteristic of the Southern Colonial home. He was also able to place the kitchen and servants' quarters in adjoining structures, thus permitting the retention of the fourfold division of rooms on the first floor. The practical New Englander, on the other hand, converted one entire side of the first floor into a large living room and refrained from the outbuildings because of the much higher fuel consumption. Other necessities caused other distinctions in style, so that we have come to look upon the Southern Colonial and New England Colonial as two different types of architecture altogether.

Dutch Colonial

In spite of these outward differences, the essence of classic architecture is retained in both. The emphasis upon horizontal lines, the economical use of space, the simple dignity are seen in both. Because of its simplicity and subsequent economy and because it is a type of architecture proven by our countrymen, it deserves serious consideration from the prospective home builder. He may be sure that he will never tire of his Colonial home and that its charm will be lasting. And what a cultural environment it provides for the raising of a family.

Dutch Colonial

While the term "Dutch Colonial" conveys a definite type of house to almost everyone, the name itself is misleading. "Dutch" does not refer to Holland and "Colonial" has no direct relationship with

Colonial Architecture. This type of home takes its name from the Dutch Colonists who settled in the lower parts of New York and New Jersey. There they lived for many years in cheery comfort. The Dutch Colonial house conveys to us the rich domesticity and love of good living.

The most characteristic feature of the Dutch Colonial style is the gambrel roof—so much so, in fact, that "gambrel" and "Dutch" have become synonymous. The legend goes that this low, sweeping roof, with its dormer windows, was the ingenious means by which the Dutch Colonists evaded the heavy tax on two story houses. And there is today a practical advantage over the two story house in the saving of materials without loss of space. The extraordinary flexibility of the style makes it possible for one to arrange the interior to suit his taste and still be assured of an harmonious exterior. One wing or two can be added without disturbing the general contour. One can compare this flexibility to Colonial types where there is harmony without freedom and to English types where there is freedom without definite symmetry.

If the decision is made to build a Dutch Colonial home, keep these things in mind: First, the best types are long and low and set close to the ground. Secondly, the dormer window should be considerably narrower than the first story. Lastly, it can be equally well executed in shingles, siding or brick, but it is not advisable to combine these materials. The narrow, high, top-heavy house is to be avoided if one is to be true to precedent. Above all let it ramble, for the Dutch Colonial home should be picturesque.

Modernized Colonial

Modernized Colonial

This style of house embodies the pleasing features of the Dutch Colonial and the many practical features of the New England Colonial. The Modernized Colonial is a very popular style of home and many houses of this type have been built in every part of the United States.

Gothic or Tudor

The Gothic style is the most flexible of all house construction. Though symmetry is sacrificed, this is more than made up for in the subtle balancing of parts. The finished result, if carefully watched, will be a beautiful composition of shapely architectural forms, varied wall surfaces, projecting casements, and rich decorative detail. For the expression

Gothic or Tudor

of one's personality in a home, nothing could be more pliable, and more satisfying.

Modern English

This type of home is easy to build and looks well in any surroundings. It can be attractively executed in brick, shingles and siding, as well as stucco. It can be

Modern English

designed to look well on any size lot. And its flexibility permits practically any arrangement, of any size rooms.

Spanish or Mediterranean

This exceedingly popular type of home has been somewhat modified to make it suitable to every climate without sacrificing any of its distinguishing

Spanish or Mediterranean

features. It depends entirely upon attractive architectural design rather than excessive ornamentation for its pleasing exterior.

The inner court or patio has been retained in some cases and in others the patio has been eliminated and a porch added.

Italian

Italian

The straight walls and simple proportions and the fine sense of balance in Italian home architecture show the observance of classic principle.

The Italian home has many practical as well as aesthetic advantages. The floor plan is not forced into a rectangle, nor do the windows have to be placed in regular position. Stucco is often used, but stone, brick and concrete blocks can be employed equally well and with splendid results. The style is economical, regardless of material used, because of its exceedingly simple lines.

Western Bungalow

Western Bungalow

This style of home has become exceedingly popular within the last twenty-five years. Thousands of homes of this type have been built in both urban and rural districts.

The low pitched roof and wide eave projections are notable features, and the type is easily distinguished by the wide verge boards and exposed rafters. There is usually a large front porch.

Cape Cod

While homes of this true American Colonial type spot the landscape of Cape Cod they will be found in the better neighborhoods in every section of the country. There

Cape Cod

is a simplicity and plainness in construction that is unusually pleasing. The interiors are commodious.

French Cottage

Distinguished by the steep roof, the dormers, and shutters, it lends itself readily to construction from practically any building material.

French Cottage

Modern American Cottage

This style of home is very popular because of the economy of construction and the small ground area required. Second floor usually has two bedrooms.

Modern American Cottage

Plans, Specifications and Contracts

Building Plans are pictures showing the size and arrangement of rooms, the location of stairs and chimneys, doors and windows, the form and pitch of the roof and all other details of construction that the building contractor must have in order to erect such a house as is shown in the plans.

Specifications are written instructions telling what materials are to be used and how they are to be used.

The **Building Contract** is an agreement between the home builder and his building contractor in which the obligations of both are set forth, the contractor agreeing to build the house according to the plans and specifications within a certain length of time and the home-owner agreeing to pay certain sums of money from time to time as the work progresses.

All three of these—Plans, Specifications and Contract—are necessary in order to insure the house being built according to design and to prevent misunderstandings.

From the plans alone the contractor cannot estimate the cost of the house any more than a dressmaker could tell you what a dress would cost if you merely gave her a dress pattern without telling her what materials to use.

The Plan Service available to users of HOME BUILDERS CATALOG is the most comprehensive and practical ever devised for the benefit of home-builders and building contractors.

Two sets of complete working blue-print plans of any house or garage illustrated in this book are furnished. One 16-page Classified Guide for listing materials, two sets of Specifications and two Building Contracts accompany the plans.

Each set of plans consists of three sheets, showing all floor plans, including basement, together with front, rear and side elevations, all drawn to a scale of ¼" to the foot. Plans also include many details of construction, cross sections, and other drawings necessary to enable the builder to erect house exactly as illustrated in HOME BUILDERS CATALOG.

The 16-page Material List Guide is divided into sections covering foundation material, lumber, millwork, roofing, flooring, hardware, paint, etc. Nothing is omitted. If the builder uses this list he will be sure that every essential item is included in his estimate. It saves hours of time and prevents costly omissions.

The Specification forms are carefully prepared by experienced architects and building experts. They specify and clearly state all workmanship and general conditions necessary for the complete construction of building. The arrangement is such that the contractor can easily fill in qualities and kinds of materials decided upon to cover a home fully and erect the building in a manner entirely satisfactory to the owner.

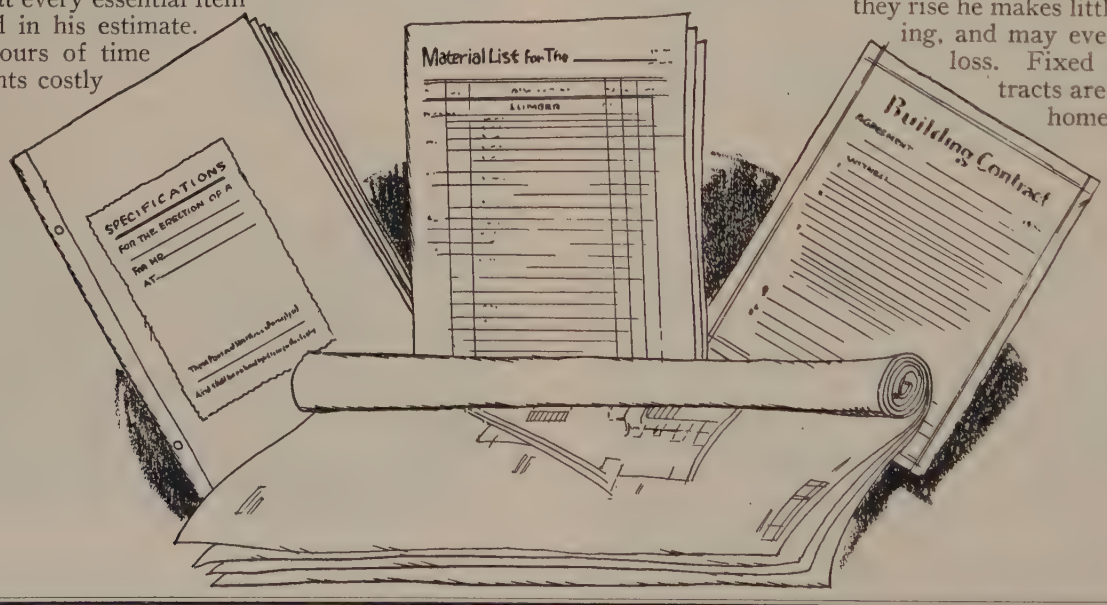
Building Contract forms are in duplicate, to be signed by contractor and home owner and thus put all arrangements and agreements in writing and on a sound and definite basis.

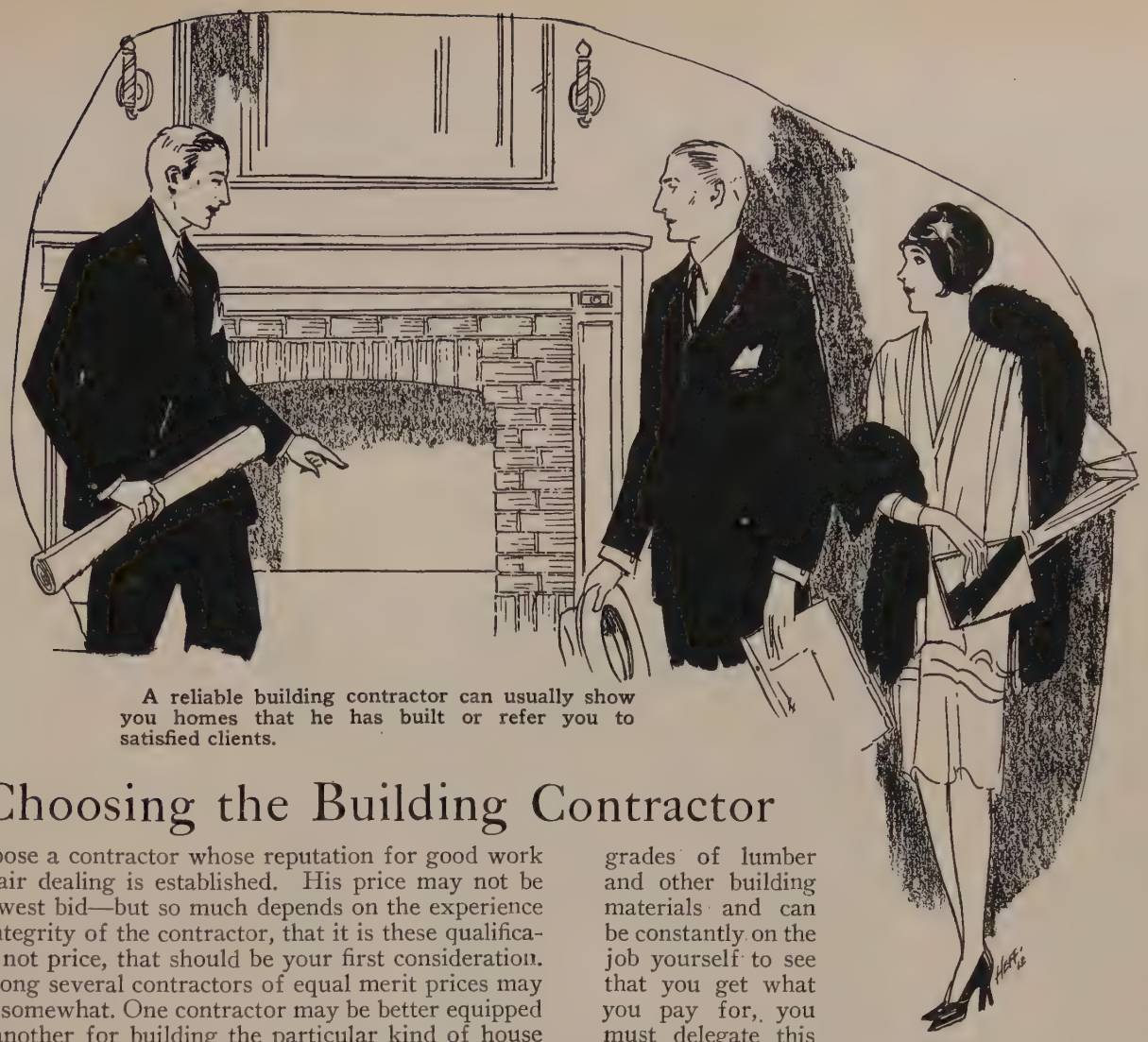
Reproductions in miniature of this unusually complete Plan Service will be found in another section of this Book.

The "Cost-Plus" Contract

It sometimes happens that because of uncertainty regarding the prices of materials or the cost of labor the building contractor is unwilling to name a fixed price for which he will do the work. Or the home builder may believe that before building operations are actually begun it may be possible to secure more favorable prices. If for any reason either party is unwilling to enter into a contract with the other on a fixed price basis, the difficulty may be overcome by what is called a "cost-plus" contract. Under the terms of such a contract the building contractor acts as purchasing agent for the home builder, buying all needed materials and employing all necessary labor on the best possible terms and submitting all bills to the home owner for payment. The latter, in addition to paying the actual labor and material costs, pays the contractor for his services, a fixed percentage of the total cost of the job.

Contractors are usually very willing to enter into a cost-plus contract because it assures them a sure profit over and above the actual cost of the job, which is not always the case when they work for a fixed price, which may have been figured too low. In other words, when the contractor names a fixed price he gambles to a certain extent on what the future cost of labor and material will be. If prices and wages decline he makes a larger profit, but if they rise he makes little or nothing, and may even suffer a loss. Fixed price contracts are better for home builders.





A reliable building contractor can usually show you homes that he has built or refer you to satisfied clients.

Choosing the Building Contractor

Choose a contractor whose reputation for good work and fair dealing is established. His price may not be the lowest bid—but so much depends on the experience and integrity of the contractor, that it is these qualifications, not price, that should be your first consideration.

Among several contractors of equal merit prices may differ somewhat. One contractor may be better equipped than another for building the particular kind of house you want, or he may not be so busy at the moment as the others and be willing to make some concessions for the sake of keeping his men employed. But a very low bid from a contractor who cannot refer you to a number of people for whom he has built houses should be carefully checked into, and usually avoided.

Unfortunately, there are some unreliable people in the contracting business as in other industries. These "jerry builders" or "fly-by-nights" as they are called, prey upon the unsuspecting home builder and, first having hooked him with a ridiculously low bid, they skimp their work and make a bigger profit on the job than a reliable contractor, whose bid was higher, would have made. Then, after completing a few buildings, they move on to pastures new before their victims discover how badly they have been stung.

The average home builder, as a rule, knows little or nothing of building materials or the proper methods of building construction. The substitution of lighter joists and rafters than are called for in the specifications, the use of an inferior grade of lumber or hardwood flooring instead of the better grade specified, a lean mixture of concrete for the foundations, unbraced joists and floor beams, a poor plastering job, a roof that looks well but leaks quickly—all of these things may account for a thousand dollars or more in the contract price and the home owner be none the wiser until at the end of a year or so his house begins to show its poor construction.

Unless you are competent to identify the various grades of lumber and other building materials and can be constantly on the job yourself to see that you get what you pay for, you must delegate this work to someone you can rely on. This someone should be your building contractor. Having satisfied yourself that he is worthy of your confidence, give it to him and pay him a fair price for his services—a price that will enable him to make a reasonable profit on the job.

It is best to give what is called the general contract to one man and make him responsible for the whole job. The general contractor, who is usually a mason contractor, or carpenter contractor, sublets to others the work he does not do himself—the excavating, sometimes the concrete work, the plumbing and gas fitting, the electric wiring, etc.—but supervises all the work himself to see that it is properly done according to the specifications.

You pay the general contractor for all work done according to the terms of your building contract with him and he in turn gives you not only his own receipt but releases from the sub-contractors as well for such work as they have done. This is important, for should the general contractor fail to pay the sub-contractors, they can (in many states) compel you to pay them for their work, even though you may already have paid the general contractor. This has more than once been the unfortunate experience of home builders who employed an unreliable contractor and, after he had collected his money and flown, discovered he had left behind him a multitude of unpaid bills, which the home owners were obliged to pay themselves.

Building Costs

What a home costs today depends very largely upon what one is willing to do without. Where the utmost economy must be exercised it is possible to reduce the cost of a home considerably by omitting some of the things one would like to have—but there is danger in carrying this too far.

Better homes are being built each year and unless you build a fairly good house today it will be an exceedingly undesirable house a few years from now. And you may have difficulty in disposing of it at any price should you wish to get rid of it and build a better home for yourself.

One often hears it said that houses cost more to build now than they used to. This is true but, if one postpones building a home of his own until houses become cheaper, it is very possible that he will continue to pay rent for the balance of his life. If landlords can afford to build houses to rent and make a profit on them, surely you can build a home of your own and be the gainer thereby.

In the homes of today interiors are as comfortable and convenient as exteriors are attractive.

It is a mistake to charge all increases in costs against the late war. During the nineteen years between the Spanish-American war (1898) and the entrance of the United States into the World War (1917) this country was at peace, yet building costs steadily increased. During the thirty-three years of peace between the end of the Civil War (1865) and the Spanish-American War (1898) the cost of homes increased.

Each generation the population of this country increases, creating a greater demand for homes. Each generation the per capita wealth in the United States increases, creating a greater number of families that can afford to own better homes.

Each generation the cost of labor increases and the length of the working day has been considerably shortened. Not so many years ago laborers received a dollar a day for ten hours work. The highest paid artisans employed on building construction—masons, plasterers, carpenters—received $2.50 for ten hours' work. Today these same men work eight hours a day and receive four or five times the wages they formerly did. It is the trend of the times.

Improved methods of building construction, mechanical aids which increase the amount of work a man can do in a day, and factory production of many things that enter into home construction—things that were formerly made by hand, on the job, compensate in some measure for the shorter hours and higher wages.

Each generation demands more home comforts and conveniences. If we were content to live in the kind of homes and put up with the inconveniences and discomforts of fifty years ago, we could still build houses for considerably less money than a modern home costs.

Let's go back half a century or even less, for a moment. Then the average home had no bathroom nor even an indoor toilet. A wooden washtub on the kitchen floor, slowly filled with water heated on the kitchen range, was the extent of bathing facilities. Each bedroom had its wash-stand, basin and water pitcher to be filled daily, and waste jar to be emptied. Rooms were heated as well as possible by individual stoves which, like the kitchen range, were wood or coal burners. Wood and coal were usually stored in a shed in the back yard and must be carried in once a day, or oftener, and ashes carried out.

In those cities where there were water mains, there was sometimes running water (cold water) in the kitchen but seldom in any other part of the house. There was no electricity in the house either for illumination or for the many uses that now lighten the tasks in the home.

There were no garages and no automobiles. Few stables, for not many city dwellers could afford a horse and carriage.

Front doors opened directly into the parlor (now the living room), because hallways and vestibules were considered a needless expense. You walked through one bedroom to get to another and to reach the kitchen you had to pass through the parlor and dining room.

Floors were of wide boards; windows were not sash-weighted and had to be held up with catches or sticks to keep them open. Screens were made of fine-mesh netting tacked in place. There was no storm sash, insulation or weather stripping. Basements were the exception not the rule.

Comforts and conveniences that formerly did not exist, or were looked upon as luxuries, are now considered necessities.

Building costs have naturally increased, but compare the modern home of today with the home of a few years ago—the modern home plainly shows its greater value and proves its difference in living comfort and convenience.

Financing Home Building

To most of us, at some time, comes the urge for a home of our own. A modest place perhaps but a "home" with cool, green lawns and sweet-smelling flowers, a little spot in which to live in happiness and comfort. And, always remember that a home of your own is within reach of anyone who is paying rent for a house or an apartment. Just take a pencil and paper and figure a little while and you will be convinced that the quicker you build your own home the better off you will be in every way.

If everyone waited until he had the available cash with which to build a home, considerably fewer houses would be built. Real home life would suffer. Much happiness, and convenience, and comfort would be lost to mankind.

The question of how much can you afford to put into a home answers itself by "How much rent can you afford to pay?" Generally speaking, the cost of the home built should about equal the monthly rent paid over a period of ten years. For example—a person paying $50.00 a month rent ($600.00 a year) can easily afford a $6,000 home. Rent of $75.00 to $100 a month ($900 to $1200 a year) will pay for a $9,000 to $12,000 home.

10 Years Rent Receipts or a Fully Paid For Home ?

The securing of money with which to finance home construction is easy. Loans for home building (secured by a first mortgage) are made by banks, by some life insurance companies, by individuals (usually operating through a mortgage loan broker) and by building and loan associations. Many building contractors now have reliable connections for the financing of home building.

The members of a building and loan association comprise two classes—lending members and borrowing members. Lending members deposit a fixed monthly sum with the association that earns interest. Borrowing members pay interest on the money loaned them by the association with which to build a home.

Building and loan associations have helped hundreds of thousands of people to own their own homes by making it easy to borrow money for home building and making it just as easy to pay the money back.

Building and loan associations have an arrangement whereby loans are repaid by a fixed sum each month, according to the size of the loan. The monthly payment keeps interest charges paid up and reduces the principal amount month by month so that each year the interest is less and a greater portion of the monthly payment is applied to repayment of the principal.

The repayment of a loan is usually spread over a period of ten to twelve years and this makes your monthly payment to the building and loan association just about what you would pay for rent. At the end of ten or twelve years, with no more effort than making out the monthly rent check, you own your own home, which very often, if you have chosen your location wisely, and built your home carefully, has increased in value and will return a handsome profit over the original investment.

While methods of repaying loans may differ somewhat with different building and loan associations the principle is the same—the gradual repayment of money borrowed over a long period of years, and a further advantage of loans of this kind as against the shorter term loans, is that they do not have to be renewed. This means a saving in legal fees for examining titles, bringing abstracts down to date, etc., because the charges made by the average building and loan association for these services are usually small and are paid only once whereas, whenever a loan is renewed, these same fees must be paid again at the time of each renewal.

While it is unwise to borrow more money with which to build a home than one can conveniently arrange to repay, there is at least this advantage in borrowing money from a building and loan association or other reliable source. There are able lawyers, experienced appraisers and realty experts in the employ of these associations who will carefully examine the title to the lot and accurately appraise its value before a loan is made.

Second mortgages should be avoided if possible. Banks, building and loan associations and other conservative lenders do not loan on second mortgages. Loans of this kind must be obtained from people who specialize in second mortgage loans, and who, because of the greater risk, usually charge a higher rate of interest.

The ideal situation is this: Let us presume you have a lot fully paid for worth $1500, and $1000 available in cash. Then you borrow $5000 more on first mortgage to complete your home. Before you start to build there is in your possession, in cash and real estate, about one-third of the total cost of house and lot.

INSURANCE

In order to protect yourself against loss by fire while the house is being constructed, a fire insurance policy should be arranged for. All fire insurance companies issue policies that automatically increase in coverage as the building progresses. Other policies covering additional risks such as damage by lightning, (unless fire results which is covered by the fire insurance policy) from wind, flood, earthquakes, etc., can be obtained for insignificant sums of money compared to the protection afforded and the peace of mind that results from the knowledge that the home investment is safeguarded.

If the building contractor does not carry employes and public liability insurance you should either incorporate a paragraph in the building contract covering this or arrange for it yourself. The cost of such insurance is small and protects you should anyone be injured on or about your property during the construction of the house.

Some life insurance companies loan money to home builders on first mortgage and include the cost of a life insurance policy as a part of the loan. The monthly payments on the loan are arranged to take care of all interest charges, insurance premiums and payments on the principal. Thus, through easy monthly payments, the loan is gradually paid off and should you die before payments are completed the insurance provides a fund for cancelling the mortgage.

Suggestions for Economy

In order to determine what features a home *must* have and what can be omitted (or may be added later) it is wise to pass in review all of the things you should have, or would like to have, and, having first determined these, to eliminate one by one those that you consider least necessary to your comfort and convenience. This is not an easy task, but when the home-building fund is limited we must give up (for the time being, at least) many things that might be retained if we could afford to spend more.

A mistake often made by those building their first home is to try to save on the cost of necessary materials and home equipment instead of building a smaller house or omitting altogether some of the things that, if necessary, one can do without. It is of first importance that your home be well constructed and that all materials and equipment entering into it be such as will last for years without more than ordinary wear and tear. The use of poor materials never results in a saving—except for the moment—for before long you will have to add to the original cost the cost of repairs and eventual replacement, and in the end the sum you save by using poor materials will be spent over and over again to keep your house in repair and maintain its appearance.

It is possible to economize without resorting to poor materials. To do so you may have to modify your ideas somewhat regarding the size of your house and the features you wish incorporated in it, but it is better to build a smaller house well than a larger house poorly.

Few home builders realize how large a saving can be made in building costs by reducing dimensions of floor plans and ceiling heights. The blue-print floor plans of a two-story house 30 x 40 feet, with 9½ foot ceilings on first floor and 9 foot ceilings on second floor, do not appear to be *much* larger than those of a 20 x 30 foot house with 8½ and 8 foot ceilings, but the cost of the 30 x 40 foot house will be two to three times that of the 20 x 30 foot house, assuming both to be built of the same materials.

Blue-print plans are usually drawn to a scale of ¼ inch to the foot and are apt to mislead people who are not familiar with them. It is so easy to add a square inch to the plans without realizing that this adds 16 square feet to the floor space on each floor and several hundred cubic feet to the space enclosed within the four walls of the house.

An extra closet that certainly would be very convenient but which is not absolutely necessary may add

fifty dollars or more to the cost of your home—an additional room $500 to $1000. So determine first of all (if economy is necessary) how small a house, rather than how large a house, will satisfy the needs of your family.

The Basement

You cannot save on foundations without endangering the stability of your house, but it is often possible to make a considerable saving by reducing the basement space. How much space do you actually require for heating plant and fuel bins, for storage space, for laundry? Is it necessary that the laundry shall be in the basement? Construction above ground costs less than construction under ground, and space for a small laundry (6 x 10 feet is ample) can sometimes be found adjacent to the kitchen, which is a convenient and clean location with good light and ventilation.

If your heating plant uses coal for fuel, space must be provided for coal bins, but if you use oil or gas for heating less basement space is needed. It costs more to provide storage space in the basement than in the attic. Why increase the size and cost of the basement when you may have ample room in the attic for storage purposes?

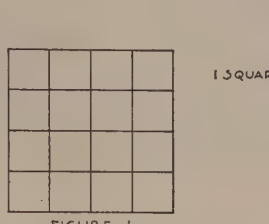


FIGURE 1.

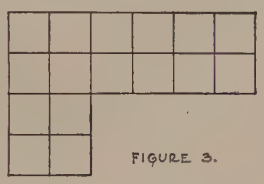


FIGURE 3.

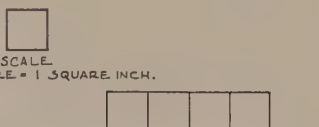


FIGURE 2.

FIGURE 4.

Do not economize by making a shallow excavation for the basement. Have sufficient head-room so that one can stand upright without bringing his head in contact with the floor joists of the floor above. If the basement floor is of concrete lay a good, thick floor (4 inches at least), otherwise cracks are likely to develop. If the soil in which your basement is constructed is damp, waterproof floor and walls and lay drainage tile under the basement to conduct moisture away from the foundations.

Save on the cost of the basement by reducing its dimensions as much as possible and omitting (for the time being at least) plastered walls and ceiling, and partitions. These can always be added later. But do not sacrifice sound construction for the sake of additional space that you may never need.

Why the Square House Costs Less

There is an old saying that "the square house is cheaper to build," and this is generally true. You will understand the reason for this if you take 16 pieces of paper, or cardboard, each measuring one square inch and arrange them in different ways, as shown above. Now estimate the length of the outside boundary of each figure and you will find that Figure 1 (the square) has the least boundary of any, though all contain the same number of square inches—16.

LENGTH OF BOUNDARY LINE

Figure 1—16 inches
Figure 2—18 inches
Figure 3—20 inches
Figure 4—20 inches

This demonstrates that when you build a square house you enclose the maximum of space with the minimum of wall. Any departure from the square ground plan means more expense for foundation and walls. This additional expense may be justified by compensating advantages, such, for instance, as better proportioned rooms, more convenient room arrangement, or more attractive exterior, but it is well to bear in mind that houses of irregular outline cost more to build than square houses of equal floor space and to consider carefully whether the additional expense is justified.

A further saving in the cost of wall construction can be made by carrying the sidewalls up to the level of the second story floor only. A typical example of this type of construction is the Dutch Colonial house, in which the bedroom floor is enclosed by the roof. One must be content with fewer rooms, or smaller rooms, on the second floor if this form of construction is used instead of carrying the walls up to the level of the second story ceiling, but the popularity of the Dutch Colonial type of house proves that it has a strong appeal for the home-builder.

Vestibule and Hall

A hallway 4 feet wide by 20 feet long requires the same amount of flooring, wall and ceiling as an 8 x 10 foot room. It is unquestionably very convenient to be able to go from the kitchen to the front door without passing through either the living room or dining room, but when one is figuring on ways to reduce the cost of the home it is well to balance this convenience against the saving that will result from eliminating vestibule and hall and having the front door open directly into the living room.

The Kitchen

The small kitchen well provided with built-in conveniences is generally favored. In such a kitchen the housewife does not weary herself by unnecessary steps, for everything she needs is close at hand. Plenty of closet space in the kitchen itself eliminates the pantry that was formerly considered a necessary adjunct to the kitchen.

Porches and Sun-parlor

If a house plan is selected that includes a sun-parlor, a porch at front, rear or side, and possibly a sleeping porch as well, it should be remembered that these, however, desirable they may be, can be omitted if their cost unduly taxes the resources of the home builder.

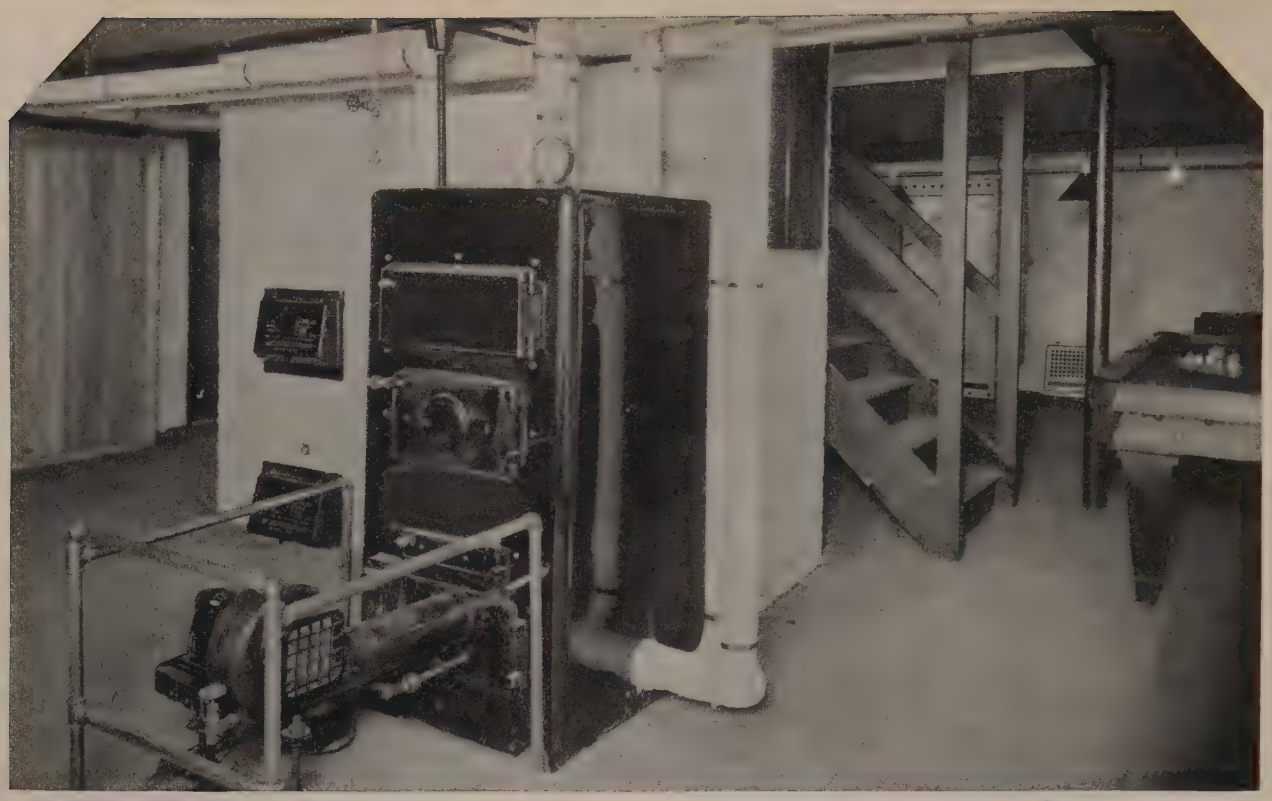
In many cases porches and sun-parlor are not part of the main building plan but are additions to it and can be added at any time. The wise thing to do, therefore, when one has a limited building budget is to contract for the essential part of the home and add porches, sun-parlor and other desirable additions at some future time.

The Bedroom Floor

The problem of the attic stairway has been cleverly solved by the Disappearing Stairway. This is an entirely practical stairway that disappears into a ceiling panel when not in use.

Disappearing Beds

Progressive builders and home owners use them, thereby reducing building costs considerably and making rooms, previously used but a few hours each day, available as convenient and comfortable sleeping rooms.

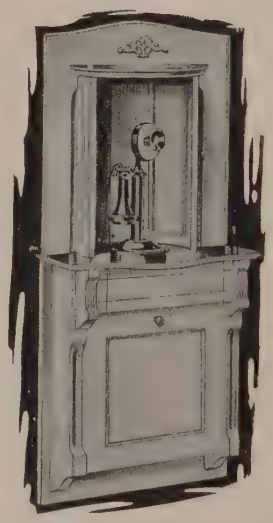


Modern heating equipment creates no dirt, requires but little attention, and operates economically. The majority of types available to the home builder are sightly and may be used as an integral part of the basement furnishing scheme.

Making Your Home Worth More

The value of a house is measured primarily in terms of livability. Location, architectural design and beauty of finish are important, but the living-equipment of the house has become a big item in its desirability and hence in its selling price.

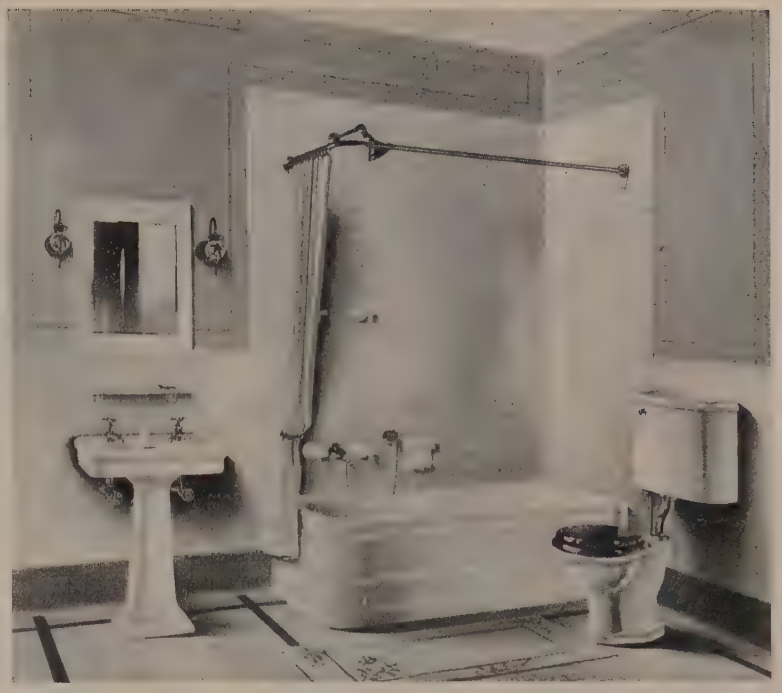
Striking proof of this change in the viewpoint toward the home is had from considering the old colonial mansions of the past century, in comparison with what is regarded as necessary for a home to be called modern today. Few, if any, more beautiful plans can be found than those afforded by these old mansions with their spacious halls, beautiful staircases, restful living rooms and other unquestionable architectural features. But no one familiar with present day building practice could rightly call any of these old homes modern, convenient or even entirely comfortable.



Their heating arrangements, though beautiful to the eye, were unable to furnish sufficient, much less uniform heat for the occupants. The kitchen equipment, though picturesque, was slow and did not offer the degree of control necessary for today's work. Laundering was performed under the most unfavorable conditions. With the additional outside icehouse, real domestic refrigeration was unknown.

Without appreciating any less the architectural features, the desire of today's home purchaser for a particular house is governed more than ever by its facilities and equipment installed to give comfort, convenience, cleanliness and sanitation. This means that the extent to which a house is modern today can be judged largely by the degree to which it is equipped to meet the fundamental needs of the home. Speaking generally, these needs are arrangements for cooking and refrigerating food, disposing of household rubbish and garbage, providing instant hot water for household purposes, insuring a uniform house temperature at all times during the heating season, and facilitating the washing, drying and ironing of clothes under home conditions. Some of these household units are primarily labor saving devices and others rank also as comfort giving equipment. Like the modern plumbing and lighting systems most of these units also contribute in a substantial way to the health of the family.

Let us start first with the kitchen range. It is available in a color to match the kitchen scheme or in all white enamel if that is preferred. It is equipped with an automatic lighter so that the range is always ready for use without fuss, dirt or trouble for the housewife. Just above the burners is found the oven heat regulator which has raised the standards of home cooking and baking to the level of an exact



Modern bathrooms are unusually well equipped due to the many excellent plumbing fixtures available at moderate cost.

science. With the assistance of the heat regulator and time and temperature charts, recipes can be followed by the housewife just as exactly as the druggist prepares a prescription. Electricity has also come into wider use in the kitchen, and electric ranges are available in many beautiful designs and colorings.

In the modern home you will note that the faucets in the bath, lavatory, kitchen and laundry always give a plentiful and immediate supply of hot water from an automatic water heater. At the turn of the faucet you have plenty of hot water—always at the temperature desired and ready when you want it. An ample supply of hot water lightens the task of washing the dishes and cleaning the home, in addition to providing a real comfort for the tub or shower and for shaving. This system of water heating provides an ever ready supply of water at all seasons of the year without attention.

In the modern kitchen garbage is easily, quickly and sanitarily disposed of in the incinerator which burns up all forms of rubbish and household waste. This keeps the kitchen spotlessly free of waste, and materially reduces the fire hazard from rubbish.

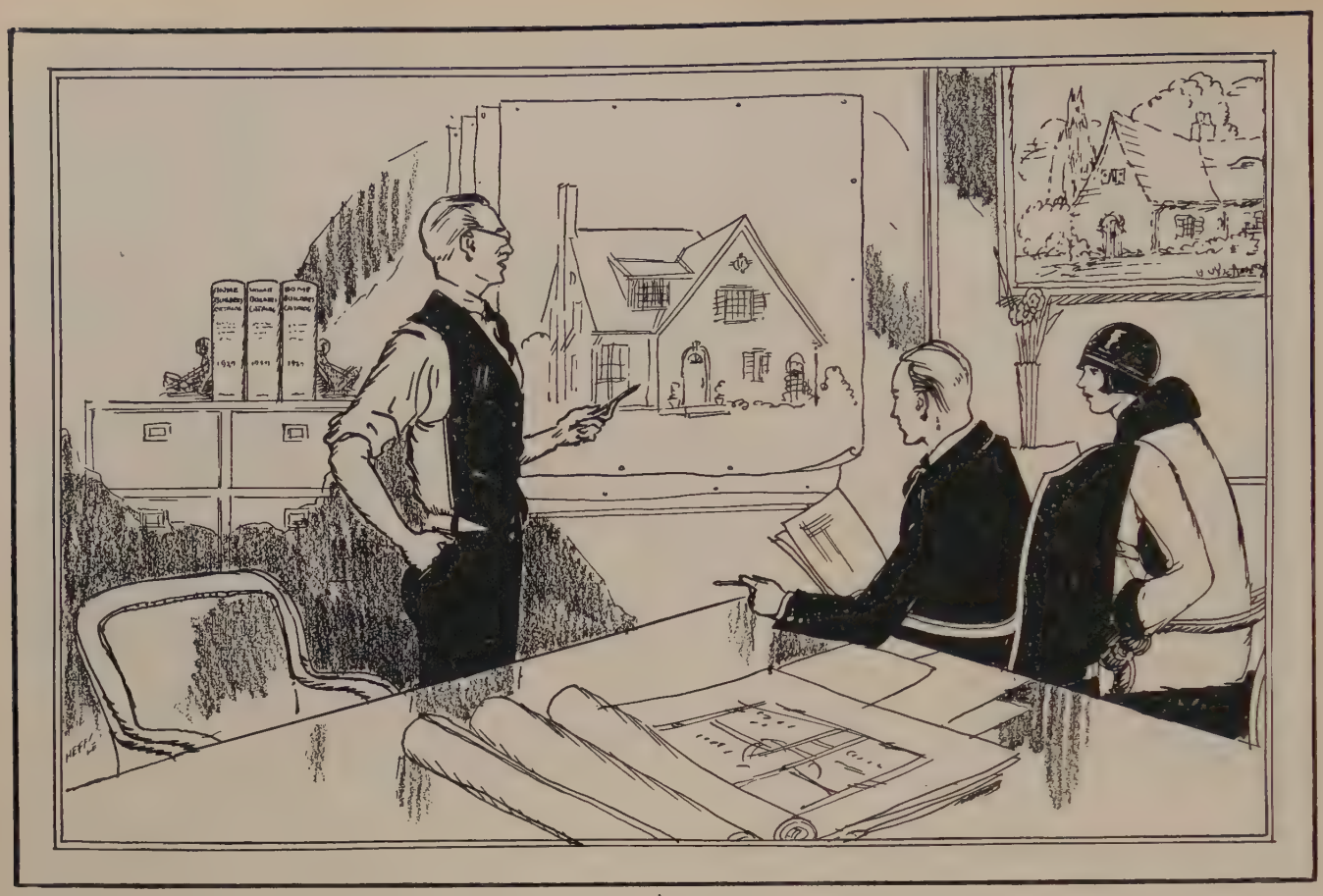
In one corner of the kitchen stands a white enamel, or colorful refrigerator. It may be either cooled by ice, electricity or gas. This is the latest service performed by gas—giving cheap, reliable and uniform refrigeration. Paradoxical as it seems, the small gas flame is used to produce the chill in the refrigerator. Gas-fired refrigerators work on the absorption principle, entirely different from the commonly known compression types. Mechanical refrigeration has been developed to a remarkable and satisfying degree of convenience and efficiency.

Fireplace heaters in the various rooms can be used in the late Autumn or early Spring when the weather is sometimes chilly, to give warmth for a few hours without starting the furnace. Today's modern home has no such thing as the old time cellar. That space is now utilized as a playroom for the children or perhaps as a billiard or recreation room.

In another part of the basement is the laundry, with adequate modern equipment. The heated clothes dryer dries clothes as fast as they can be washed. Wind, rain, slush and snow are no longer wash day terrors. There are no heavy baskets to be tugged up and down flights of stairs.

When one realizes that foresight in laying out a little extra money on labor saving and comfort giving equipment not only increases the daily pleasure in living but also adds more to the value of the investment, then there is a double reason to be proud of the home and to get greater happiness from owning it. The home owner may not expect or wish to sell his house when he builds it, but the mere fact that it has this higher selling value gives him greater satisfaction in owning it.

See that your kitchen is arranged to expedite work and to save labor. Ventilating fans keep the air clean and fresh and remove all trace of cooking odors.



Selecting Your Plans

First determine in a general way the type of house you prefer—American Colonial, Dutch Colonial, English Cottage, Italian Villa, Spanish Bungalow, or whatever may be the particular style that appeals to you. (See Plan Section).

Next study the floor plans and note whether the house you prefer has the necessary number of rooms, and if these are of the proper size and arranged to your liking. As there are many different designs in each of the several architectural styles you are sure to find a house that suits you, inside as well as out.

Now study from every possible angle the plans of the house selected. Imagine yourself in the kitchen and note how you would reach the front door, the stairs, the living room.

If your personal preference is for a house with a hall running from front entrance to rear entrance, then do not select a plan in which one must pass through living room or dining room to reach the front door or stairs.

If you prefer a house with living room across the entire front do not be content with a plan that suits you in other particulars but has the living room on one side.

If you prefer to welcome visitors in a reception hall do not be content with a plan in which the entrance from the street is directly into the living room.

Remember there are 468 different home designs in this volume, and among these you are sure to find at least one that suits you in every particular. *Look for it until you find it!*

The sum of money you spend for your home will probably be the largest single investment you will ever make. Safeguard the home investment by being absolutely sure you have the satisfactory plan before you go ahead.

Many a home-builder has found that "extras" added ten to twenty-five per cent to the cost of his home—and at that the contractor made less profit than if the original plan had been adhered to. Afterthoughts are expensive when construction has begun—the time to think is *before you begin to build.*

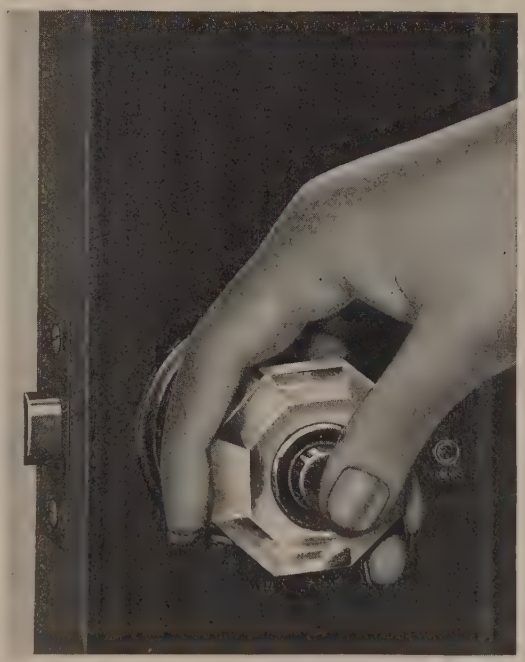
A careful study of HOME BUILDERS CATALOG —Manufacturers' Section, and Educational Section as well as Plan Section—will remind you of everything you should consider in connection with your home. It is a complete encyclopedia and reliable guide of building plans, building materials and home equipment.

Every page suggests ideas that will aid you in making your home more attractive, more comfortable, more convenient.

With the information contained in this volume you can plan wisely, and build well, a house that will be forever "a home of complete satisfaction and no regrets."

Up-to-date Locks

Illustrations Courtesy of Schlage Lock Company



While you are enthusiastically planning the many fine new modern things you are going to put into that new home and visioning all its comfort, convenience, and charm, give a thought to the door locks.

Did you ever count the number of times you turn a knob or key in one day? You would be surprised. Perhaps there is nothing about the whole place you use more, nothing your guests contact with quite so much. Every time any one enters or leaves, or goes from room to room, there is a knob to be turned or a lock to be opened, and the door lock becomes either the most convenient or the most annoying equipment in the whole house. You would not think of installing old-fashioned oil lamps in that new home. See that the door locks are as modern and convenient as the lights, as charming and distinctive as the lighting fixtures you went to so much pains to pick out.

Modern locks like modern lights operate at the touch of a handy button in the knob. Simply press the button to lock the door from within, simply turn the inner knob and it unlocks automatically. Perfect privacy and protection against intrusion from within, but in case of fire the tiniest tot has only to turn the knob and walk out. Instant action always without the use of inside keys that are so easy to lose and so hard to find.

This new lock is as distinctively charming as it is convenient. The dignity of absolute simplicity, the richness of superb finish, the artistic charm of symmetrical curves and contours, unbroken within by a single keyhole or visible screw. You may have glass knobs or metal knobs, plain, hand-hammered, or in period designs, if you prefer. And finished to match the other hardware for the home.

For Modern Doors

As for durability, they will outlive the building, all working parts being made of cold-rolled, electro-galvanized steel, with metal trims of solid brass or solid bronze. Installation is very easy, even for one unfamiliar with tools. No complicated mortising, assembling, or adjusting. Each lock is assembled at the factory and comes to you as a single, self-contained unit, with screws and plates all ready to slip into the door. A marker in the box gives the few instructions necessary. Drill two holes, insert lock and latch, and put on plates. That's all. Not even an inexperienced workman can make mistakes to cause future trouble.

Then try the knob. Note how firm it feels. No danger of that knob wobbling. It is part of the unit type construction which makes each lock a permanent, integral part of the door itself. Note the quick, elastic rebound of the latch, you can open and close a door quick with compression spring action like that.

"The show feature of our whole place," is an expression frequently heard among the hundreds of thousands of proud home owners whose good fortune and good judgment inspired them to specify these modern locks. Leading architects, contractors, and builders speak equally well of them. And it is even being said that no home is completely modern without them. With-al, the price is most moderate.

Modern locks are an important detail of modern house construction. Even the smallest item should not be overlooked if the house is to be entirely satisfactory. Locks must be reliable to function properly if it is to be a home complete, and lacking nothing that will add to comfort and convenience.

Special Glass Brings Pure Healthful Sunrays into the Home

Illustrations Courtesy of American Window Glass Company

Science has made its contribution to the building industry.

At last the sun-porch can have *real* sunlight.

Window glass is now available which transmits the ultra-violet, the health-giving rays of the sun and brings outdoor health indoors. Some of this glass is priced so reasonably that it can be used for general glazing purposes.

Health in Sunlight

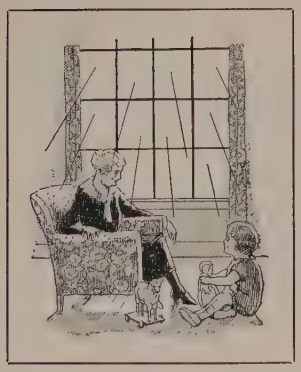
How often have we heard the question asked: "Why can't we acquire the same healthy coat of tan in the sun-room that we do outdoors?" The answer is that "tanning" comes from exposure to the sun's invisible ultra-violet rays which are more or less "shut out" by ordinary window glass.

Physicians tell us that these same rays combat disease germs, stimulate everyone mentally and physically, and aid in the natural development of growing bodies.

The Essential Rays

We know from experience that "unfiltered" sunlight is nature's own tonic. Since the time of the ancient sun worshippers, people have correctly connected sunlight with life—it has remained for modern science to discover that the ultra-violet rays of the sun are the rays that are essential for health.

Indoor Sun Baths

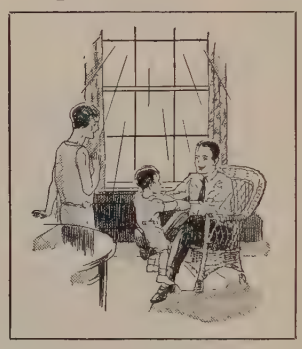


It is obvious that the sun-porch more than any other place should be "open" to these essential rays of sunlight. With the proper glass in the windows the sun-porch becomes a health spot where sun baths may be taken every day of the year without the necessity of leaving the warm room. Such a room is a permanent investment in *health* that keeps the entire family in robust health and cheerful frame of mind.

A Sun-room for Every Home

With the advent of health glass came a noticeable increase in the number of homes equipped with sun-porches. Families have learned that the health porch is as important a part of the house as the kitchen or bedroom. Progressive builders throughout the United States have found the installing of health rooms to be a profitable end of their business.

Important Points in Selecting Health Glass



In selecting a health glass for the sun-room, here are four important points to be considered—

(1) The glass chosen must transmit a satisfactory volume of the sun's ultra-violet rays.

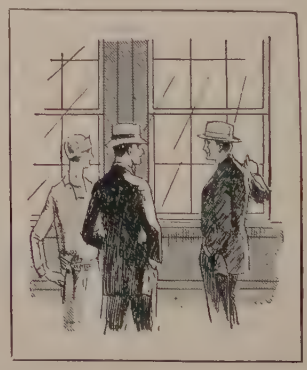
(2) It must be a hard glass—one that will not deteriorate on exposure to sunlight and lose its capacity of ultra-violet ray transmission.

(3) It must be of high quality and beautiful appearance—suitable for the finest building or residence.

(4) It must be a clear glass, one that does not have a depressing effect upon the occupants due to its failure to transmit plenty of daylight.

If the glass you select fulfills these qualifications, you may expect to create a tremendous amount of good will among your customers.

Meet Modern Needs



Be prepared — modern civilization is tending more and more toward indoor life —the public seeks a substitute for the physical stimulation that formerly came from life in the open. Even today buildings glazed with a health glass have a decided advantage in sale or rental competition.

Appropriate Lighting Fixtures for Every Room

Illustration Courtesy of MacBeth-Evans Glass Company

Modern lighting fixtures play an important part in making rooms more beautiful, more convenient, more livable.

Lighting fixtures today are obtainable in many beautiful designs and in wonderfully attractive finishes and treatments.

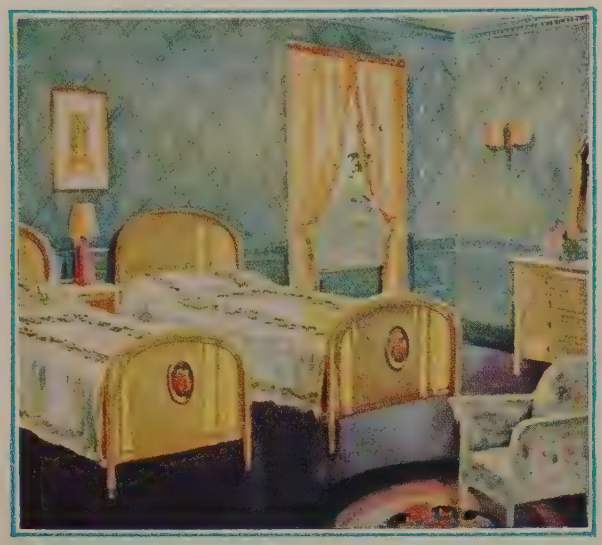
There are appropriate fixtures for every part of the house—inside and out—upstairs and down—and perhaps no other one detail can do so much to increase the value and beauty of a room as an appropriate lighting fixture.

There are simple and ornate chandeliers, pendant fixtures, wall brackets and ceiling fixtures, in so many pleasing designs and finishes that it would be hard indeed to find the home owner or prospective home builder who could not be entirely satisfied in the lighting equipment for his home.

Lighting equipment will usually change the entire appearance of a room. It will become the dominating note in the room and enhance the beauty of rugs, draperies, decorations and furniture.

Shaded lights are usually advisable both from the standpoints of soft, mellow lighting and from a health angle as well. In a dining room, a chandelier hanging low over the table can be fitted with glass shades that will throw a strong light on the linen and silver and conceal the lamp filaments from the view of those seated at the table.

The glass shades of today have kept pace with the electric fixtures they adorn. Both are very attractive.



Paints and Wood Finishes Preserve and Beautify

Illustrations Courtesy of Breinig Bros. Inc.

In the selection of a permanent home there are three fundamentals, which must be followed to produce lasting results—good materials, good workmanship and good Varnishes, Enamels and Paints. The proper surface protection of both the interior and exterior are imperative where beauty and permanency are desired.

The home owner will find good Varnishes, Enamels and Paints a wise and profitable investment, while cheap and inferior materials will prove a source of continued regret and expense.

In exterior house painting select nothing but the highest grade scientifically manufactured Prepared Paint. It will wear longer and more uniformly than the old fashioned product, and will produce the most beautiful and harmonious finished effects. Be sure to have it applied by a Master Painter. Do not follow the advice of any one who does not know paints or painting. The home owner cannot afford to take this chance. Any reputable manufacturer will be glad to send color cards and literature covering all branches of painting. Likewise the Service Bureau of your local hardware and paint dealer will gladly give authentic advice on your finishing problems.

The average person builds but one "home" in a lifetime. This usually embodies his ideal and a great deal of the pleasure and satisfaction to be derived from it in the years to come will depend upon his keeping it well preserved and inviting, both inside and out.

For new work three coats of paint are generally required. It should be applied in thin coats, not flowed on, but brushed out well and evenly. Each coat should dry thoroughly before the next is applied. One coat of paint every few years thereafter will thoroughly preserve your property and save many a repair bill.

In repainting, surface conditions must receive more consideration. If the old paint is firm and free from chips or scale, one coat is sufficient. However, a reputable Master Painter always should be consulted on repainting work.

Essentials in Selecting Color Combinations

According to its particular type of architecture and surroundings, each home presents its own problem as to the combination of colors best suited to its environment. This selection, however, has been simplified by usage and advanced methods, to the point where any owner can make a suitable and harmonious color selection by bearing in mind the following essentials:

A house surrounded by numerous trees and much foliage appears best in the lighter colors, such as white, gray and cream.

Clear or open surroundings afford a wider range of color selection and will better carry some of the heavier colors, such as green, tan, buff and the lighter shades of brown.

As a rule, the lighter shades should be selected for body colors, as they are more pleasing and of lasting satisfaction. Heavy greens, browns, buffs and reds are more suitable for trimming purposes or for use on restricted areas of surface.

Also it should be borne in mind that white and the lighter shades give an appearance of added size. Small houses appear larger in lighter colors and large houses appear smaller in the darker colors.

If possible, confine color combinations to two, or at the most, three colors. If you have a large house with more than the usual amount of gable, cornice and trim surface, and desire a varied color combination of four or five colors, consult a Master Painter and have him work out a pleasing combination embodying your ideas.

Suggested Color Combinations

The Colonial type home, with its pillars and wide expanse of lawn naturally suggests white or light cream in solid color, without contrasting trim effects.

The Dutch Colonial type likewise should be light in color. Straw or colonial yellow, with white trim, bottle or bronze green blinds and grayish green gambrel roof is

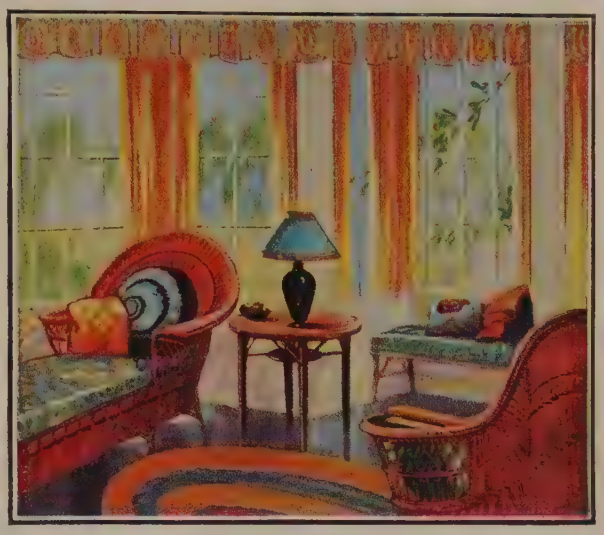
very appropriate. Another suggestion for the Dutch Colonial would be pearl or pure gray body, with white trim, bottle green blinds and roof.

The hipped roof Colonial style house surrounded by profuse foliage is set off to best advantage with white body, green shutters and red roof.

A less striking effect is obtained with French gray body and olive green shutters and roof.

The American suburban style home, with pyramid roof, which follows no set architectural precedent, is admirably adapted to the soft gray tones with just enough variance in the trimming colors to add warmth. The body might be pure gray, trim white, roof and sash green.

If this color combination appears too cold, a brighter and warmer effect can be obtained with a light drab body, ivory trim and a green roof.



The gable roof style house affords more latitude in the way of color selection. This style of architecture will better stand the darker colors, as they cut down the general appearance of height given by this type architecture. Where the house is surrounded by green foliage, neutral colors and soft brown tones are very desirable, especially where a harmonious green tone is used on the roof. With the sash and entrance in a light color, a striking contrast will result and give the tone needed to relieve the somber effect.

For a small house or cottage, the various shades of brown with ivory or green trim and a green roof are very pleasing.

Another effective combination is a gray body, with white or ivory trim and sash, red roof and green shutters.

Many bungalows have shingled sides or gables, which should be stained with a good shingle stain. Browns, greens and reds are the most popular shades.

Bear in mind that shrubbery and other surroundings form the setting with which your exterior color scheme should harmonize.

Interior Wood Finishing

Interior finishing is more varied providing a more intimate environment for the owner than the exterior finish. In planning a house one cannot be too careful of the finish selected. The most attractive homes are never gaudy, never fantastic. Different kinds of wood require different types of finish, but there is no need of sacrificing any interior decorative scheme through lack of color effects.

The information given here applies only to the finishing of new work, as refinishing involves too many details to cover properly at this time. All refinishing jobs should be discussed first with a practical Master Painter.

Interiors are usually finished according to the purpose for which the various rooms are intended, as well as in agreement with the type of architecture.

White enameled woodwork, a light flat wall paint and an ivory colored ceiling makes a sanitary and pleasing combination for the kitchen, which blends in with the white plumbing fixtures, now found in the modern home. Varnished woodwork in the natural color of the wood is equally satisfactory and requires less care.

The most pleasing flat wall tones for the kitchen are the light shades such as ivory, cream and light tan.

Most any interior decorative scheme can be easily worked out where the woodwork is enameled. Charming sleeping room combinations are obtained where walls and ceilings are tinted with delicate shades of pink, blue, caenstone, gray and ivory.

A particularly beautiful combination for a reception room where there is plenty of light, is white or ivory enameled woodwork with a caenstone or putty tint flat wall paint. This is also a pleasing combination for the guest room.

Where a varnish finish is desired, on open grained woods such as oak, ash and chestnut, it is necessary to use a Paste Wood Filler.

On close grained woods, such as birch, gum, pine, cypress, fir and redwood, a Liquid Filler may be used.

Living rooms of oak, birch, gum, chestnut, ash or pine with a dull gray lacquered finish, side walls ivory and ceiling in white, make a delightful combination. Rich floor coverings and mahogany or walnut finished furniture will add life to this setting. The floors should be finished natural, in either Wax or Varnish (never use a Liquid Filler on floors).

In the Colonial type residence, white or ivory enameled woodwork with mahogany finished furniture can hardly be improved upon.

While gum or birch finished in mahogany is usually associated with a white enameled finish, there are several tones of brown which are equally as effective when used in conjunction with a tan or russet flat wall finish.

Dining rooms finished in gum or birch and stained a walnut color with furniture to correspond are suggestive of richness and refinement. Side walls should be ivory, cream or a medium shade of tan, and in any of these combinations the ceiling should be kept a light color.

A particularly rich combination for an artistic living room, with or without a beamed ceiling, is a fumed oak color for the woodwork with a cream ceiling and tan side walls.

A darker color combination can be obtained with mission oak finish for the woodwork, light tan for the ceiling and a russet color for the side walls.

Combinations without number are available for almost any room, and the above suggestions are but a few of the many that can be used for the better known and more commonly used woods.

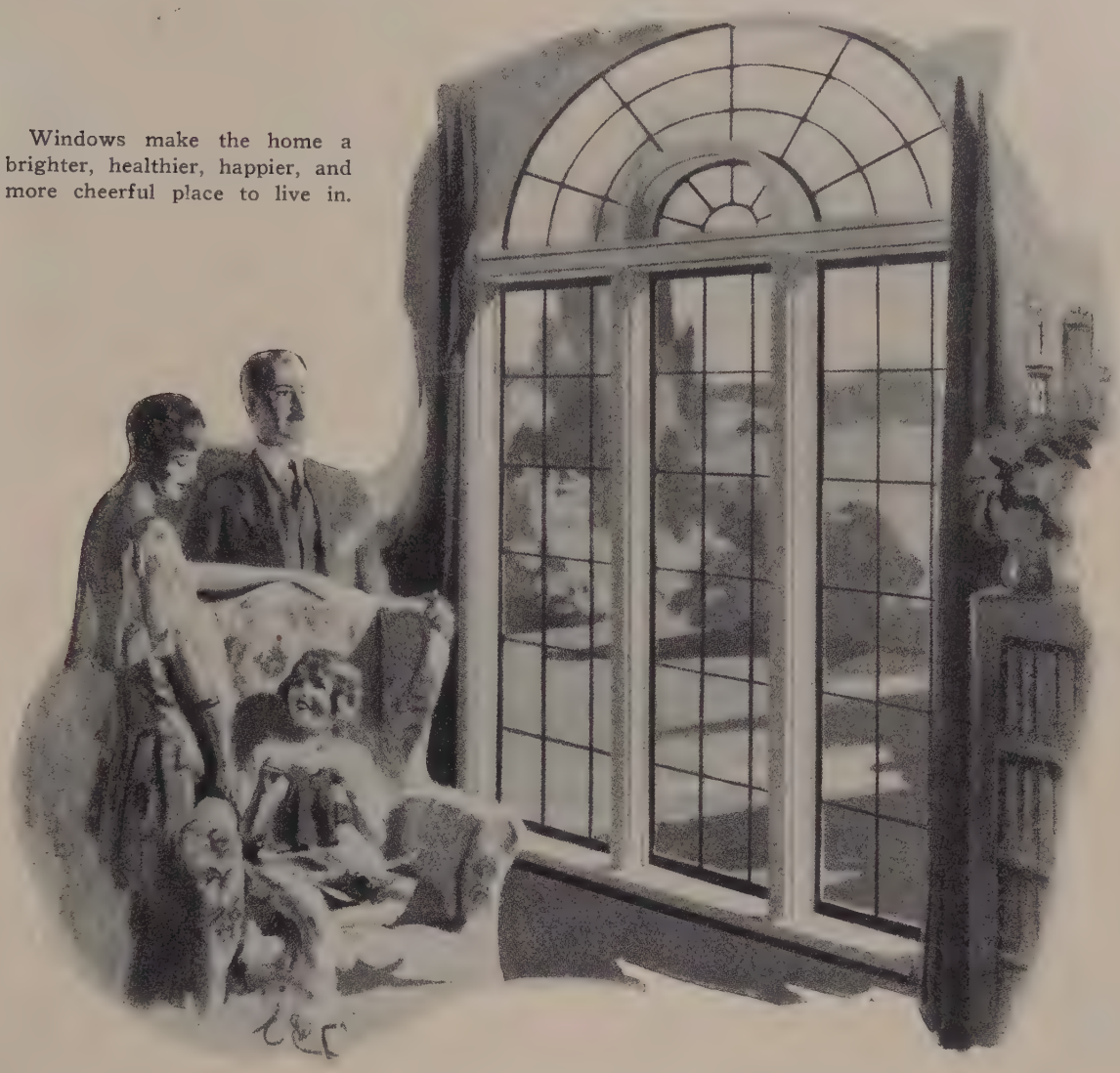
Casement Windows Admit Fresh Air and Sunshine

Illustration Courtesy of Casement Hardware Company

Casement windows lend themselves to modern architectural design and practical house construction. But, as important as the windows themselves, is the use of the proper hardware and fittings. Devices that insure easy operation and perfect fit. That provide safe and efficient locking either in closed or open position.

Hardware that is stormproof and rustproof. That is constantly efficient and trouble-free. Perfectly proportioned, carefully balanced and well finished.

That will harmonize with the window itself and with the immediate surroundings. It is these little details of home building that require careful attention because sometimes, on account of their seemingly unimportance, they are treated too hurriedly, which leads to trouble and inconvenience.



Windows make the home a brighter, healthier, happier, and more cheerful place to live in.

Windows banish gloom. They let in sunshine and fresh air. They bring cheer and healthfulness into the home—into every room from basement to attic.

No other detail of the home is more important than its windows. And, modern windows add much attractiveness to the home.

The windows of today are more than pathways for light and air. They are beautifully designed, artistic creations that add immeasurably to architectural design both inside and out.

Much can be accomplished in home construction through the proper arrangement or grouping of windows.

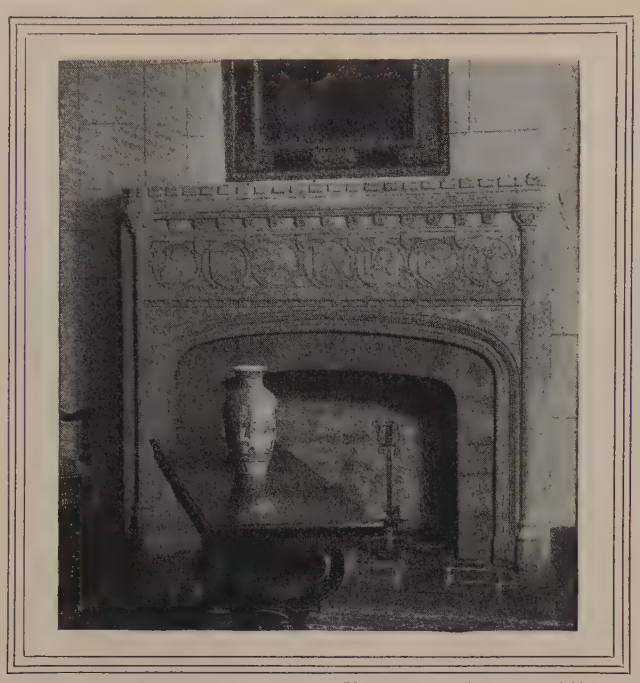
A many-windowed sun room or glass-enclosed porch has brought new life to many an old fashioned home.

Many a house has been made brighter, cheerier, healthier, by adding more windows. A bay in the living room, a pair of dormers in the second floor or attic.

Whether a new house is being built or an old home remodeled—make the windows of generous size and have plenty of them. Let sunlight in from attic to basement.

Windows are too important a factor in the life in a home to be hurried over. They deserve and should receive careful consideration and attention.

Windows are available in many types, designs and sizes. There is a proper window for every home building purpose, efficient windows, attractive windows.



Illustrations Courtesy of Jacobsen Mantel and Ornament Co.

Ornamental Mantels Add Decorative Value to Rooms

Nowadays practically no homes are built without at least one fireplace. They can be used to advantage in bedrooms, recreation rooms, and other rooms as well as in living rooms.

Rooms are usually planned with the mantel as the dominant feature. The open fireplace is still an important part of domestic life. Leaping, crackling, cheery flames bring a feeling of comfort, a sense of tranquility.

True grace and significance are found in the modern room designed around and in keeping with an impressive mantel. The pleasing proportions and harmonious detail of this dominant object invariably results in a room having the "livable" quality.

It is gratifying to note that architects and others insist more and more upon good period designs. A twentieth century design for the cabinet of a radio or phonograph seems more in keeping than a Louis XIV ornament. But, a mantelpiece is essentially a thing of tradition. It is more a mantelpiece in its period dress than in any modern design we might devise for it.

The period in which a room is to be decorated and furnished is more than half established by the mantelpiece alone. The bold carving of the Italian Renaissance, for instance, identifies more than the mantelpiece it ornaments.

It gives the room a splendid basis for its entire scheme of decoration. And, a room furnished with modern pieces is graced with a sense of the past if it contains nothing more of ancient design than a mantelpiece.

To obtain the effects they desire, architects and decorators are relying less upon antique mantelpieces and are using instead mantelpieces of composition art stone. This material makes possible the exact reproductions of period designs in exquisite carvings, and the duplication of colorings, textures and grains of natural stone as well.

The comparatively low cost of art stone and the convenience with which it may be used has added materially to the present day increase in fireplaces.

Fireplaces, aside from their artistic merit, help to make a living room more comfortable, particularly on those severe winter days so prevalent in certain sections of the country.

One can hardly picture a more cozy scene than a group seated in a carefully furnished, well planned living room with a roaring log or coal fire, or the heating glow from an electric or gas log.

Fireplaces, too, add much to the comfort of a recreation room or to a bedroom large enough to accommodate a fireplace without bringing too heavy an appearance to too small a room.

Fireplaces are often located in one corner of a room instead of being placed at one end, or centered on the wall space, the particular room in question and the location and arrangement of the chimney being the deciding factors in placing a fireplace.

In many homes today a fireplace is flanked on either side by attractive book niches, or built-in book cabinets. Windows can sometimes be placed above these cabinets to advantage as a part of the decorative scheme and to afford better lighting and ventilation as well.

While wood or coal burning fireplaces require a chimney, a simple flue will take care of a gas fireplace and an electric fireplace requires nothing more than the opening in which to set the unit.

Reliable units such as dampers, throats, etc., are manufactured that greatly assist in perfect construction of a wood or coal burning fireplace and make it proof against back-drafts, smoking, etc. The use of these units are a big saving in mason's time in building a fireplace.

It is a matter of personal preference as to what kind of fireplace should be installed because attractiveness, comfort and pleasure can be derived from practically any type of fireplace, and there is a wide range in designs, materials and styles to choose from.

Fireplaces

May be simple or ornate, large or small. They may be arranged to accommodate logs or coal, gas or electric grates.

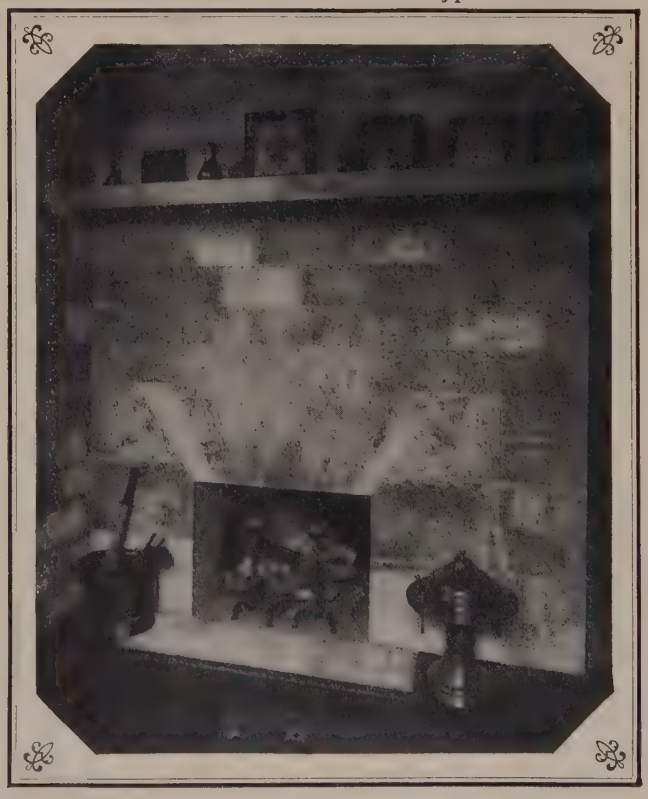
Colonial with tile face and hearth, shelf and pilasters in white woodwork.

Brick Colonial with wood pilasters and shelf in white or ivory.

Colonial fireplace, plain brick, trimmed with white enamel woodwork.

A fireplace of stone, or it can be cast or plastered trovertine or other finishes.

Oriental type suitable for Italian, Spanish and other Mediterranean types of homes.



Fabric Wall Coverings

Illustrations Courtesy of Standard Textile Products Company

The vogue for decorative walls has encouraged manufacturers of fabric wall coverings to create more attractive and artistic styles, making it possible for a home owner to select styles for every room in the house, from laundry to attic.

The modern vogue for color in the kitchen is met with a range of brilliant hues in colored enamel-finished fabrics that enable the housekeeper to glorify the kitchen and make it a pleasant place in which to work.

Fabric wall coverings have been in use for twenty-five years and the vogue for them steadily increases. What are their particular merits that they should outlive so many fads and fancies that have come and gone during the past quarter of a century?

Fabric wall coverings are divided roughly into two classes, the kind that are complete, finished wall decorations, ready to hang without any additional work required to be done by the decorator.

This group includes a wide range of styles from plain tints in dull or glazed finishes; artistic decorative styles for bedrooms, dining rooms, living rooms, nurseries and halls; rich looking metalline brocades which are ideal for panelled walls.

The second group of fabric wall coverings may be classified as wall linings. These are semi-finished fabrics to be used as a base for further decoration.

One of these fabrics is a specially prepared, oil-filled and stiffened canvas, showing a weave effect; it is ideally suited for glazing and fine decorative work.

Another of these wall fabrics is a smooth, flat white finished cloth ready for painting. No priming coat is necessary; one coat of enamel produces a good job; with two coats, a perfect enamel finish is obtained.

Still another fabric covering for walls is an oil-filled muslin that is an inexpensive wall and ceiling lining; partially prepared for decorating. This is used extensively as a lining for expensive wall paper, as it prevents cracking and tearing.

The average home owner can find in the first group of fabric wall coverings, a sufficient assortment of patterns and colors from which to select styles for every room.

These fabric wall coverings are hung the same as wall paper with the same kind of paste. They are complete, finished decorations although some decorators and architects specify these fabrics as a base for more elaborate and expensive decorations. The fabric base protects the finished work from the chemical action of plaster.

Almost every kind of wall decoration that runs into money can be made more lasting and satisfactory if done on a fabric base. Experienced decorators are applying plastic paint over fabric, and using wall fabrics as a permanent foundation for fresco work, marbleizing, imitation wood graining, and all kinds of mural decorations.

Housekeepers particularly like the advantages of these modern wall coverings because aside from their decorative qualities, they can be easily kept clean with a damp cloth. The surface is impervious to moisture finger marks and grease stains. Soot and dust are readily removed. Any flat surface, whether it be of plaster or wall board, can be decorated with wall fabrics. Joints of wall boards should be filled with plaster and made smooth before applying the fabric.

Owners of new homes need not wait for walls to settle before applying fabric wall coverings, as cracks which develop, due to shrinkage of the walls, do not break through the fabric and, if necessary, the fabric wall coverings can be easily peeled back and re-pasted into perfect position. Just as home builders have learned of the advantages of quality products such as copper gutters, brass water pipe and protective roofing, so have they learned that money spent for interior wall decoration can be made an investment by the use of fabric wall coverings.

Where the matter of maintenance and up-keep cost is a factor, fabric wall coverings have much to recommend them.

When applied to new plaster walls and ceilings fabric wall coverings not only supply the necessary decorative design or color, but they really protect the plaster from much damage such as the scraping of chair backs against the walls. The fabrics reinforce the plaster and when cracks develop they will not show through the surface of the covering. If corner cracks occur, due to the settling of the house, it is quite a simple operation to pull down part of the wall covering, repaste it, and thoroughly hide the cracks.

The most popular fabric wall coverings are made of strong cloth, painted by machinery with four coats of durable oil colors. If you prefer painted walls here is paint already applied, with the added advantage of a non-flaking, non-tearing fabric base.

The many kinds of fabric wall coverings now obtainable enable a home owner to secure numerous unique and individual decorative wall treatments as well as the always popular plain and pastel flat finish effects if they are preferred.

To the person with an old house to remodel and redecorate, fabric wall coverings are indeed helpful. Old walls and ceilings as a rule have been cracked and patched so much that it is next to impossible to do much with them aside from hiding the defects completely by covering them with decorative wall fabrics.

The textured treatment of these walls is admirably suited to give the handcraft effect and to distribute an agreeable pattern throughout the room. Walls are important in any decorative plan.

Suitable and Effective Treatments for Walls

Illustrations Courtesy of Alpha Portland Cement Company

Walls are the backgrounds for the furnishings of rooms, and for the people who live within.

The exposure of the room will govern the selection of wall color. Use warm colors (reds, yellows, lavenders, etc.) in rooms that have cold exposures (North and East) and cool colors (blues, greens, etc.) in rooms having warm exposures (South and West.)

The pattern or figure of draperies and upholstery will govern the choice of plain or figured walls. One should attempt to strike a pleasing balance by using patterned walls with figured or striped drapery and upholstery fabrics and conversely, figured walls with plain drapery and upholstery material.

The tenet that a room shall be furnished on a scale of ascending color values will influence the choice of the tone value used for the walls.

Take one room—say a living room—with a southwest exposure, and select the best wall treatment for it according to the three principles accepted. By applying the same methods to any other room in the house, it will be easy to select the most agreeable wall treatment for that room.

Washable bathroom walls in some pleasing color tint are more desirable than walls finished in ghastly uncompromising white.

The walls of a room are the background for its furnishings and, when intelligently treated, greatly add to the final decorative effect.

A southwest exposure is a warm exposure. Therefore we need a cool color to complement or neutralize it. The Chinese toile over drapes at the windows are green figures on a cream background. The furniture and floor coverings, and possibly a gayly colored India print on the wall, project a strong pattern into the general furnishing scheme. So much pattern must be subdued by selecting a plain wall finish.

The ceiling of this room is cream color and the floor is mahogany. Therefore, some color midway in tone value between dark brown and light cream will be best adapted for the walls. There are any number of wall treatments which will successfully meet the requirements outlined.

Personal preferences will dictate the choice to be made, but care must be exercised in order that unity and not chaos will be created. The wall treatment will either make or destroy a beautiful interior, and the selection of the wall treatment will reflect the good or poor taste of the home builder.

Textured Walls Give Added Character to Home Interiors

Illustrations Courtesy of
Atlas Portland Cement Company

Textured walls in various neutral colors lend undeniable charm to the interior of the modern home.

There is a suggestion of both the old and the new about textured walls. Rooms always look bright and fresh, attractive and interesting when textured walls are used. Individuality can be wonderfully expressed in wall surfaces treated in this way.

There is such a wide range of colors and textures to choose from that every taste can be perfectly satisfied. And, textured walls provide an admirable background for the artistically furnished home.

A spot of riotous color or a subdued tone each finds an equally friendly background in this wall treatment.

Living rooms, dining rooms, recreation rooms, libraries, dens, other rooms, too, can be greatly beautified and made more attractive through treating the walls in this way.

Charming archways between rooms, varying heights of floor levels as between a living room and dining room, ornamental metal rail or grille—all of these details show to better advantage with a background of textured walls.

Treatments of this character permit unusual effects. Rich gorgeousness or appealing simplicity can both be exemplified to the last degree.

Walls are too beautiful to hide today. The preceding generation was only satisfied with a room when every available inch of wall space was covered. Pictures, hangings, prints and other odds and ends were hung on the walls in endless profusion.

Today everything has changed. Fashion now dictates less crowded rooms, no suggestion of overfurnishing. Fewer pictures, carefully hung. Perhaps a rich tapestry.

Broad expanses of unadorned wall may not have been attractive in the days that have passed. But, with the modern interior treatments, the decorative open archways in certain styles of homes, the careful placing of furniture, the built-in niches and cabinets, and other details so popular in modern house construction, walls suffer from too much crowding of pictures and other hangings.

Courtesy W. & J. Sloane Mfg. Co.

Linoleum, Room by Room

Have you a room that isn't quite right? A dark, uninviting hallway? It's easy to brighten at very little expense—to make a room a harmonious ensemble of color—with linoleum. Are you planning a home that must be charming thruout? Take into consideration what linoleum can do for each individual room.

Begin with the hall. Here bright patterns are suitable, and have an air of cheerfulness and welcome. Marbleized effects are especially distinctive,-and need no rugs, making the hall, which gets so many muddy footsteps, easy to keep sparklingly clean.

Don't be afraid of the living room. How many living rooms have you been in that were gloomy, spotty, illassorted, unrestful? Well-selected linoleum establishes a harmony with walls, draperies and furniture, making interiors of a charm and distinction that suggests the skillful hand of an experienced decorator. That linoleum is delightfully resilient and pleasant to walk on also counts in its favor in planning the comfortable homes of today.

Linoleum is ideally suited to dining rooms. Crumbs just will get on the floor; food will be spilled and chairs are always being scraped back and forth. Linoleum is not easily injured, crumbs are instantly wiped away, there is no back-breaking sweeping or moving of furniture needed. In homes where there are young children linoleum saves mother much work, and in dining rooms everywhere a colorful linoleum pattern is as smart as it is practical.

Linoleum long ago proved its charm on sun porches and its bright utility in kitchens. For these rooms there are new patterns in beautiful colors constantly being put on the market—tiled effect patterns—patterns in blue, in green, in red or gray or brown—and novelty patterns for those who wish to be more daring in their color schemes.

In the bedroom Jaspe or plain linoleums are generally chosen because they are restful, although there are many small-figured designs, especially intended for bedrooms, that have pleasant warmth and texture. Gray, blue, green, tan—you will be sure to find a shade that will make a dark room lighter, a shade that will "dress up" the room you don't want to spend much money on.

For the nursery the sanitary qualities of linoleum must not be overlooked. When well-laid, there are no cracks in linoleum, no place for germs to breed. With hardly any exertion linoleum can be kept to hospital standards of cleanliness, and yet have the color and warmth that make a charming room. And there are now especial patterns for children's rooms—patterns with gay designs of ships and amusing figures.

And don't forget the closets! Once a place in which to toss things out of sight, the door hurriedly shut lest a guest see its disarray, the closet now has not only the floor, but the shelves and even the walls of bright linoleum. Easy to keep in order, bright and colorful, its spick and span cleanliness invites you to show it off, the most modern note in today's efficient housekeeping.

And last but not least there is what the engineers call the "reclaimed land,"—the attic that once was a store house and now is a spare room, the cellar that once was a coal hole—and now has a playroom. Linoleum—colorful, gay, inexpensive, pleasant to tread on—linoleum reclaims every inch of waste space in the house, giving you dividends on your investment, dividends in happy hours that don't mean extra work.

There are several kinds of linoleum. Inlaid is long wearing, having the pattern running clear thru to the burlap back. Printed linoleum is less expensive, and has, as the name implies, the pattern imbedded into the surface. Different kinds for different purposes: Printed linoleum is just as colorful generally and gives years of wear. The pattern of inlaid cannot be worn off, and is worth additional cost where a permanent installation is wanted.

Illustration Courtesy of Wisconsin Land & Lumber Company

Hardwood Floors Help Make Attractive Homes

Nothing can make or mar the appearance of a room any more than its flooring. Smooth, beautiful, polished floors, crack-free and dustless, sturdy and lasting.

Floors that enhance the beauty of the rugs and furnishings, that give back, in soft reflections, the light from shaded lamps and modern fixtures.

Floors that are a constant source of pleasure, that are easy to keep spotlessly clean and dust-free. Floors that are sturdy and lasting. That are carefully watched and guarded through every step of manufacture.

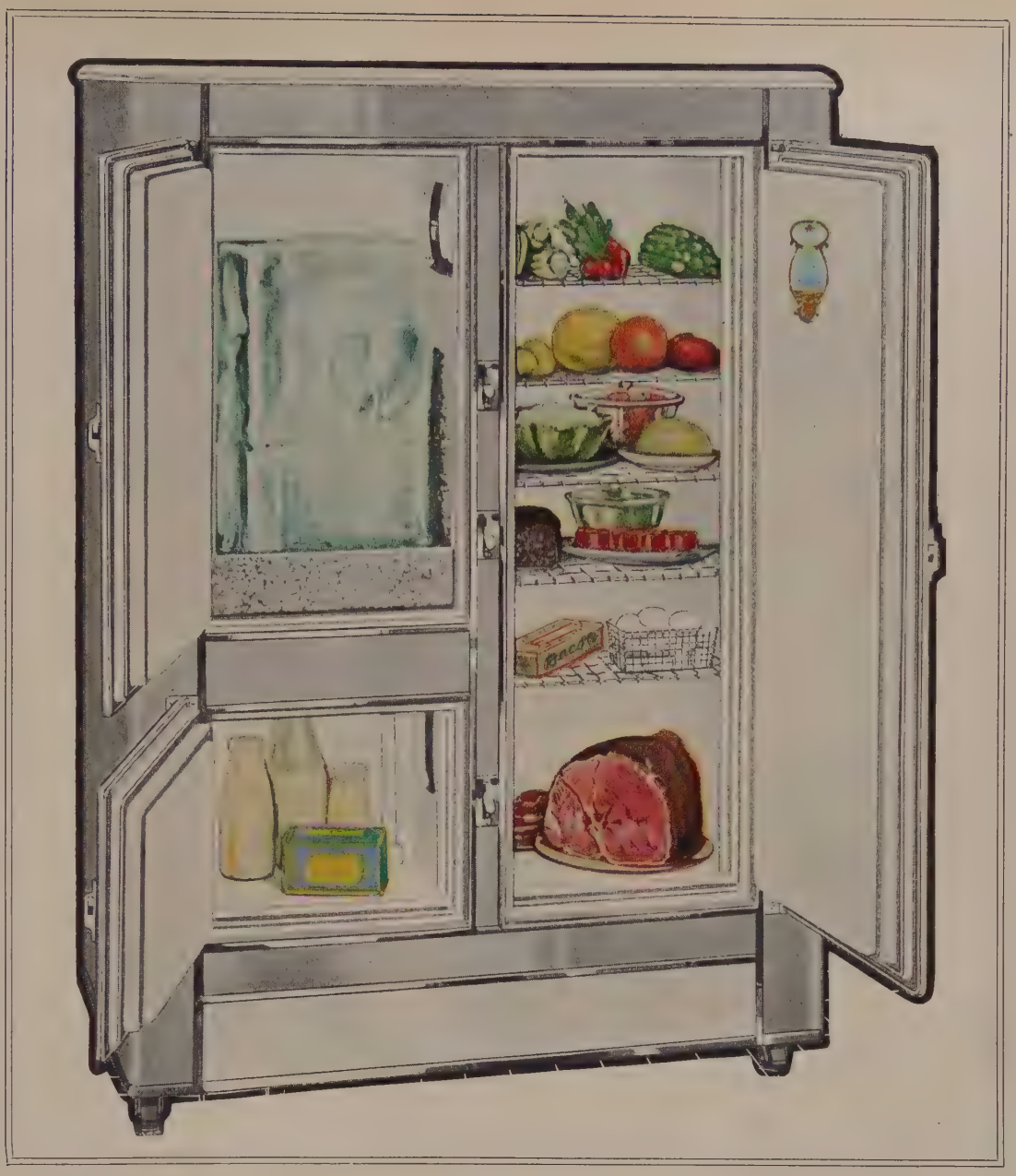
That are carefully cured, thoroughly seasoned, so that they are easily laid, firm and true. Floors that do not warp, spring, or squeak. That are easily surfaced and finished.

Floors of quality are a source of constant satisfaction and pride. A splendid investment because of their wearing qualities, their continually good appearance.

The first cost is not high. And, much time and labor is saved in laying and finishing because quality is there both in material and in modern manufacturing methods, and quality in floors, as in anything else, is always more economical and satisfactory in the end.

For the new home, or the home that is being remodeled, use floors of character. Remember, they can be finished in colors that will harmonize with every room. Natural colorings or delicate tints may be effected to blend with colorings of walls and ceilings, to form a perfect setting for the rugs, or present a contrasting background to bring out more strongly the natural beauty of the floor coverings.

Flooring is too important an item in the home to pass over hurriedly. Give this detail careful thought because much of the beauty and attractiveness of the home depends upon its floors, their finish and treatment.



Every Complete Home Needs a Good Refrigerator

Illustration Courtesy of Leonard Refrigerator Company

Nothing in the home is more important than the refrigerator because upon the proper storage and preservation of food depends the health and welfare of every member of the family.

In the modern kitchen there will always be found a good refrigerator. It makes the best kitchens more complete, and provides a convenience and health asset that is vitally necessary.

Then, too, there is always the possibility of adding beauty, and dignity, and pleasure to this part of the home when the choice of a refrigerator is carefully and properly made.

The size of the family and the general color scheme, and treatment and arrangement of the kitchen are all points that should be carefully considered before making a refrigerator purchase.

Efficiency and economical operation call for corkboard insulation or its equivalent. The greatest pride and satisfaction will result from owning a porcelain lined refrigerator. Refrigerators of this type always present a clean, fresh appearance and they require but a minimum of effort to keep them in splendid condition both inside and out.

The refrigerator should be placed in a convenient location handily available, and away from the stove, furnace register, or radiator.

Food should be placed as shown in the illustration above to secure the best results.

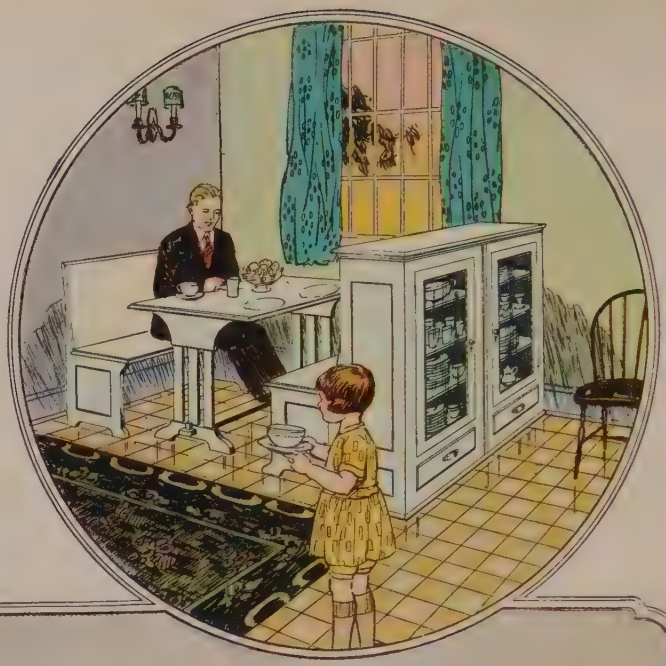
Refrigerators can be procured to blend harmoniously with the interior of the kitchen, or contrast pleasingly with it.

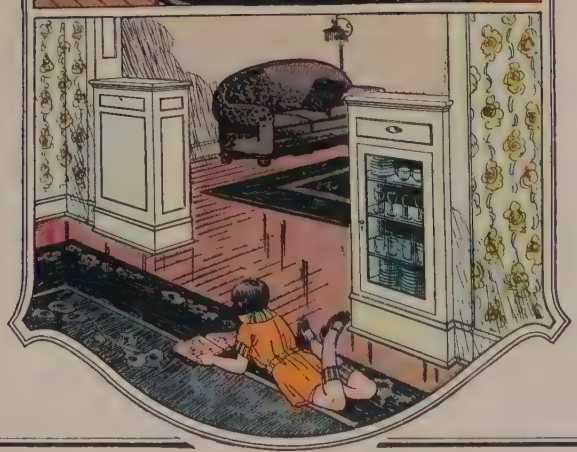
Good refrigerators can be purchased for either natural icing or mechanical operation, in an unusually large variety of attractive styles, designs and finishes. And, in a size to meet every desire and requirement.

HOME INTERIORS

In remodeling many of the older homes convenience has been accomplished by installing a breakfast nook with buttress china cabinet in the large roomy kitchen. In smaller homes and apartments this same unit fits in admirably in the kitchenette-dinnette combination where the china cabinet becomes a divider between these two sections of the same room.

Modernization has turned thousands of barren, cheerless "front" rooms into pleasingly restful living rooms. Book cases sized to fit almost any requirement and built to blend nicely with a Colonial Mantel over the new fireplace plus a little paint and some modern lighting fixtures have completely changed the interior of many old-fashioned rooms. Here is combined beauty, utility, and economy.





In many new homes and recently modernized ones the old single door between dining room and living room has given way to French doors or the broad archway with buttress cabinets for books or china to give convenient accessibility and distinctiveness. Today, preference of the women folk is the governing thought that points the way to convenient, economical essential standardized built-ins. They must have both beauty and utility. Convenience-fitted houses and apartments require less furniture. Living is easier and so much more pleasant. Modern living facilities command an income sufficient to pay a good interest on the investment. Drab, lifeless, barren houses and apartments go begging and mean a loss to the owner. Modernizing with built-in conveniences is essential for owner homes, or rental properties, and the building material market affords a greater selection today than ever before in its history.

Illustrations courtesy of Premier Standardized Woodwork

FOR MODERNIZING

Color and convenience have come into homes—both old and new—much to the delight of every member of the family. In the new wave of home modernization that is sweeping the country and bringing living standards up to a new high level probably nothing has contributed more than paint and standardized ready-built conveniences that are easy to install in new houses or modernized homes.

No room in the house has been overlooked by the designers of home comfort and utility ideas in built-in work. The bath room now has its folding seat, along with the new bath room dresser and many varieties of medicine cabinets. The dining alcove, the dinnette, or the kitchen (if roomy enough) can be equipped with any

one of a number of desirable breakfast sets, in both folding and permanent type. The telephone has a niche all its own and in some designs is completely hidden. Doors between much used rooms sometimes disappear and the pleasing lines of a Spanish archway gives a vista of other inviting rooms beyond.

In the kitchen a multiplicity of cabinet arrangements with outstanding features are available. Cabinets are made sectionally now that can be suited to almost any conceivable arrangement of wall space, windows, stoves, refrigerating units, sinks and drain boards. The kitchen may have, as part of the cabinet installation, an ironing board that quickly folds back into the broom cabinet door when not in use, or the ironing board can be installed separately in the wall. Some designs are made with the usual large board and a smaller one in the position shown.

Courtesy of Premier Standardized Woodwork

Illustration Courtesy of Concealed Bed Corporation

Correct Color Schemes Make

Color in the bedroom has come into wide usage and is growing more popular every day. Past generations have been content with somber rooms with white bedspreads, and possibly color in the curtains.

Today, everything must be colored. Beautiful shades for walls, hangings, rugs, carpetings, lamps, spreads and even the furniture. Unusual colorings, harmonious, or in pleasing contrast. That color, properly applied, is more beautiful, more inspiring, more appropriate, we leave it to your good taste to decide.

Surely the rooms pictured above have unusual charm. Imagine yourself waking up in these cheerful, pleasant surroundings. What better way to start the day? To the woman who may spend much of her time in the bedroom this colorful environment is essential. Here, she can be inspired to look her best when dressing for the evening. Here she can

Illustration Courtesy of Concealed Bed Corporation

Cheerful, Restful Bedrooms

sit during the day, if she so desires, in a cheerful, restful atmosphere.

It seems but fair to refer to the bedroom as the most important room in the house. It is there that we often spend more time than in any other place.

Comfortable beds and a cheerful atmosphere are not luxuries but are necessary to a happy existence, the birthright of every man, woman and child, and drab, unattractive rooms do not have the right effect on any human being regardless of sex.

The above illustrations show perfectly appointed bedrooms. Neutral tones are used for the walls. The furniture is done in light colors with appealing designs.

The draperies and rugs give the bright and rich color tones so essential to a bedroom. In this case a superb color harmony has been effected, one that is somewhat unusual as well as appealing to the eye.

The Charm of Color in the Kitchen

Illustration Courtesy of Chicago Panelstone Company

This is the age of beauty, of color, of spotless cleanliness.

Color, which for years has been confined to the living room and bedrooms, has come into other rooms—has spread throughout the house. And with it, has come a new joy of living.

Walls of glistening tile in beautiful tones and tints bring to the kitchen a different atmosphere—put it up on a higher plane. Make it a place of beauty and comfort. An inviting place where work is easily and quickly done because the kitchen has been changed from a place of onerous tasks to a place of pleasant duties.

And color, color represented in pleasing walls of richly tinted tile, has brought about much of this remarkable change.

For Breakfast Nooks, Too

Carry the tiled walls through that pleasing archway into the adjacent breakfast nook, so handily placed just off the kitchen.

See how it adds to beauty here. How much more cheerful and dainty it makes the room that is growing more popular every day for the serving of family meals.

Modern equipment for the kitchen—storage and china cabinets, utility cabinets, broom cabinets, ironing board cabinets, refrigerators, and the many built-in and other kitchen features appear to better advantage against a background of colorful tile.

In the bathroom, tiled walls add much to beauty and cleanliness.

Imagine a gracefully molded, low built tub with a background of harmoniously blending or charmingly contrasting tile. Tile walls have an appeal that is hard to satisfy in any other way. And the ease with which they are kept clean and sanitary, means much in the saving of time and labor.

Color Brings Added Comfort

Most people think of color simply as an agency for creating beauty; but color is equally essential to comfort, too. A cold gray-blue wall in a kitchen facing to the north creates a feeling of actual bodily discomfort. Changing the wall color to yellow will immediately produce an effect of cheer.

Tile walls offer an unusual opportunity to have rich and desirable color schemes in such rooms as kitchens, breakfast rooms, bathrooms, lavatories, vestibules, etc., and color is just as important here, and just as much an asset to the home as any other room in the house.

Through a new process it is possible to have these beautiful walls at moderate cost. Panels of fire-resisting material four by five feet, and ⅜ of an inch thick are easily and quickly installed.

They are ready decorated and will greatly improve the appearance of the kitchen, breakfast room and bath, or wherever they are used.

Modern Kitchen Equipment Gives Housewife More Leisure

Illustration Courtesy of The Wasmuth-Endicott Company

The old fashioned kitchen has gone. No longer does the housewife have to put up with large pantries, store rooms, countless cupboards, tables, and other space-wasting equipment.

Today, in a kitchen half the size of former kitchens, she has more room, and useful room. The principal reason for this economy in space is the kitchen cabinet with its numerous compartments, drawers, shelves and devices for every conceivable kitchen accessory.

Well planned cabinets where everything is instantly available and easily reached because the modern kitchen cabinet represents the utmost in efficiency and convenience.

The housewife of today need spend only about one-third of the time she formerly spent in the kitchen. She accomplishes more work with considerably less effort.

Statistics show that she only takes about one-fourth as many steps as she formerly did while preparing a meal. Furthermore, her kitchen can be put in order in a few minutes time, whereas in the past it frequently took until bedtime to "clean up."

Surely no woman who has her own interests and the welfare of her family at heart, will consent to try and get along without an efficiency kitchen in this day and age.

There is no good reason on earth why work in the kitchen should not be made easier and pleasanter, and the hours saved from drudgery devoted to more enjoyable and pleasanter pursuits, and recreation. The modern kitchen makes this radical change possible because of the many improvements and conveniences so easily obtainable.

If you are contemplating building a new home, or remodeling an old one, be sure to include in your plans a modern, efficient kitchen, and a built-in breakfast or dining nook. The benefits and enjoyment derived from them will pay the cost tenfold.

Dining Sets *Make Modern Kitchens* More Efficient

Here the table is set for breakfast. It will comfortably seat four persons. The table and seats require only a small floor space when down as shown.

As shown below, the table of the disappearing dining set folds up with the inside end going up, thus all crumbs, water, etc., left on the table, fall off onto the floor instead of into the cabinet.

The table top is of porcelain enamel on steel, hence it makes an excellent work table when not required for dining. The kitchen worker can sit as she works on one of the folding seats.

Not one of the model kitchens illustrated by diagrams below contains more than 108 square feet of floor space, and one has only 84 square feet—yet each contains the equivalent of a dining alcove or breakfast nook in its usable floor space and its built-in equipment!

Among other things this built-in equipment consists of a disappearing dining set. When not in use, the table and seats (for four adults) fold into a wall cabinet and are concealed behind paneled doors.

There is no need to built a dining alcove in order to have dining convenience in or near the kitchen. Nor are there table or chair legs to make cleaning the floor difficult. No chairs need be carried back to the living room after the meal.

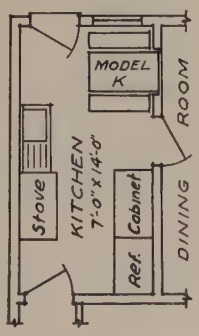
The table top of this set is made of porcelain enameled steel and serves as work table when not required for dining. The folding seats can be let down so that the kitchen worker can sit down to her work.

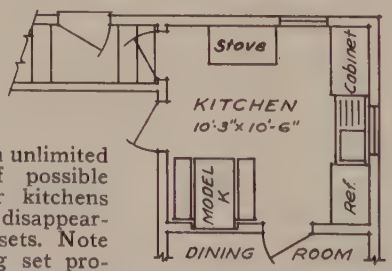
In these days of hurried meals and servantless houses, eating in the kitchen is a growing custom. On cold mornings, it is more cozy than eating in the dining room, and on hot days, the kitchen dining set is handy to the ice-box with its cold foods and drinks.

The kitchen dining set is especially appreciated in the household with children, for it provides them a dining place of their own where their muss and noise do not bother the grown-ups. Similarly, in the large house, it provides pleasant dining accommodations for the servants.

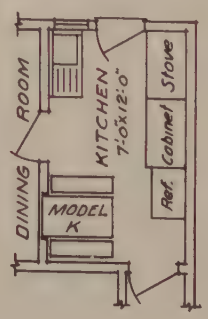
The disappearing dining set has found ready acceptance by the best builders all over the country and its price is within even the most modest of budgets.

Illustrations Courtesy of Fain Manufacturing Company





Three of an unlimited number of possible layouts for kitchens employing disappearing dining sets. Note how dining set provides the usefulness of a dining alcove without extra building.



Bathrooms of Beauty and Convenience

Illustration Courtesy of Crane Company

Bathrooms of gorgeous richness and rare beauty—bathrooms of appealing simplicity—both, in varying degrees, are available for every type and size of home. The modest cottage or the imposing mansion can each have a bathroom that harmonizes with the home. A bathroom that is modern and convenient, and in keeping with the rest of the house.

The bathroom, in many ways, is the most important room in the house. It is the one room into which are built the furnishings and decorations. Once placed, they are unalterable except at the cost of considerable trouble and expense.

Modern fixtures can be used in limited space. A bathroom can be small yet well arranged and attractive. A space no larger than seven feet long by five and a half feet wide will accommodate a modern tub, toilet, lavatory, medicine cabinet and the towel and various other wall fixtures.

The modern trend in building and the needs of the average family call for more than a single bathroom in the home. They can be duplicates, or one may be smaller and less elaborate, a secondary bathroom but just as complete as the other. Often in the modern attic a bathroom can easily be installed. Bright, colorful, with well designed fixtures and a built-in shower cabinet or tub shower.

Bathrooms may be made distinctive without a great outlay of money. They can be replete with those small but important conveniences such as built-in soap dishes. A built-in recess above the lavatory to hold toilet articles. A single, or twin medicine cabinets, a dental lavatory, a built-in dressing table or towel cabinet, built-in wall seats, and the numerous other details that belong in the modern bathroom.

No longer need the bathroom be a cold monotony of white. Color has come to the bathroom in its fullest glory and appealing charm, and is steadily growing in popularity. Color has changed the bathroom into a room of warmth, cheer and beauty and there is practically no limit to the combinations that can be advantageously used in homes of every type large or small.

Illustration Courtesy of Thos. Maddock's Sons Co.

Beauty in the Bathroom

The bathroom of today is one of the beauty spots of the home. It is as much a guest room as the living room and receives the same careful attention as to tasteful decoration. It contains not mere fixtures, but furniture —chosen for beauty, grace and individuality.

Decorators today are turning to furniture for the bathroom in which two tones are exquisitely blended under a lustrous, transparent glaze. The eye does not tire of these beautifully harmonized colors, any more than it does of the blended tints of a sunset.

In the bathrooms of today are many features designed to give unusual convenience. The so-called "medicine cabinet" is too well known to require any description here.

There are built-in towel cabinets for the convenient storage and easy accessibility of the linens and other supplies needed in the bathroom.

There are folding wall seats, dressing cabinets and tables with single, double and triple mirrors.

There are beautiful shower cabinets in every conceivable tint and tone, wall accessories to hold water glass, tooth brushes, etc. Wall niches for soap and other things, hand grips at side of tub.

Modern bathrooms are attractive rooms with every thought for the greatest convenience.

Illustration Courtesy of Thos. Maddock's Sons Co.

Artistry in China

Lavatories have changed with the passing years—and the old wash basin with its ugly lines and unattractive fixtures has gone.

One advantage of the new fixtures, in which two tones are blended into the china underbody, is that they harmonize so perfectly with any selected tile background of the bathroom, or with other fixtures either in white or color.

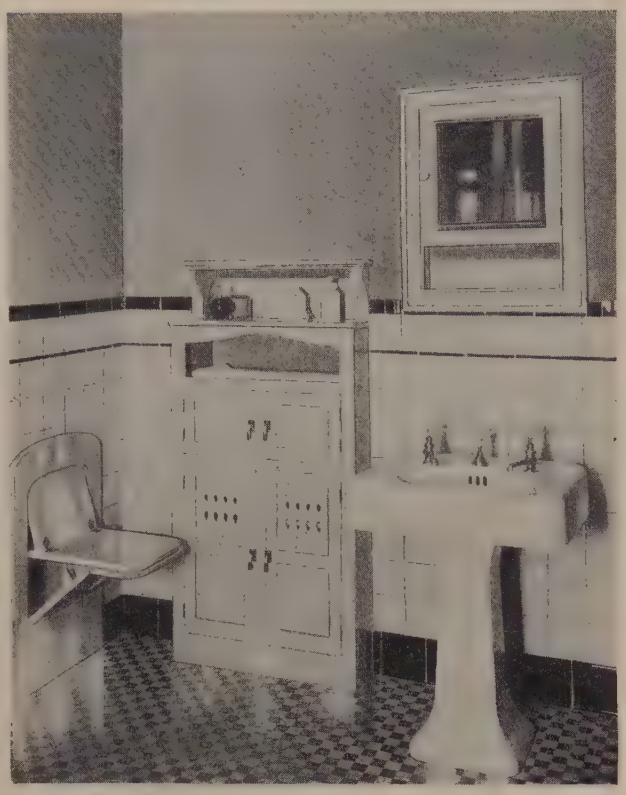
Decorators are now creating charming effects by combining these fixtures with a tub of white, cream, ivory or buff.

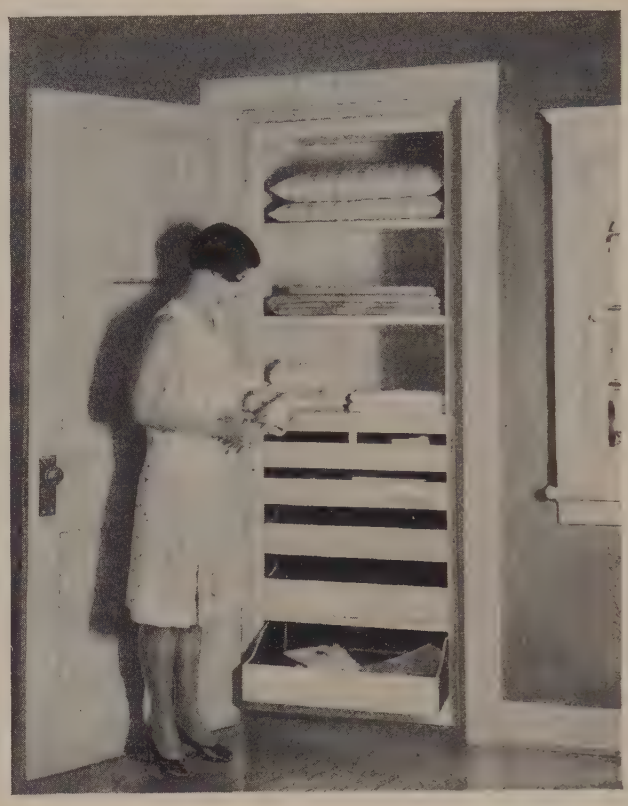
The tub is frequently walled up on the outside with the same tile used in the bathroom walls, making the tub an integral part of the walls of the room.

Lavatories can be used to advantage in places other than the bathroom. There is nothing more convenient than a lavatory, and perhaps a toilet, or even a complete bathroom, located on the first floor of a two-story home.

In the modern home where a part of the basement is used for a recreation room, a lavatory at least can be installed, and possibly a toilet and complete bathroom and shower.

Color can be used to advantage in these places, too, or the fixtures can be in white, cream, ivory or buff, according to individual tastes and preferences.





Making the Bathroom More Complete

Illustrations Courtesy of Premier Standardized Woodwork

The strictly modern bathroom is as convenient as any other room in the house because it is fully equipped for the handy storage of all of those things necessary for the toilet and bath. There is a bathroom dresser that will be much appreciated even in the most modern of colorful bathrooms.

This dresser is made of wood and is shipped (knocked down and carefully packed in a carton) in the natural wood so that it can easily be painted or finished to blend with any color scheme. It affords complete storage space, on its three shelves, for brushes, sponges, hot water bottles, toilet paper and soap supply, and other needful bathroom miscellany for the whole family. Anything—everything needed in the bathroom is handy. There is a large compartment for soiled linen, a shelf for clean towels and a shelf for the larger toilet articles and accessories that do not fit conveniently into the usual medicine cabinet.

Then, there is a handy folding wall seat that replaces chairs or stool, and economizes floor space. When not in use the seat folds into the wall. It is strong and well made to hold any normal weight. Combined with the bathroom dresser which, when fitted into the wall, extends only six inches into the bathroom, the utmost space economy is achieved.

The Old Closet Gives Way to the New Linen Cabinet

The old closet in the average home was placed most anywhere—under a stairway, out in the hall, or maybe next to the back porch. Sometimes it was little more than a hole in the wall behind a door. Little or no provision was made for the economical use of the space occupied.

Today there are a variety of arrangements in linen cabinets. Planned as a part of the new home, or installed where the old closet used to be, in the home that has been or is being modernized, this new linen cabinet utilizes every square foot of space.

In the design pictured here the lower half is devoted to visible front drawers stoughtly made and easy to slide in or out. The upper half is arranged for shelves that can be adjusted to varying depths between. The whole cabinet when properly installed is practically dustproof. The door fits snugly. All parts are nicely finished in natural wood and can be painted to blend with the color scheme of the woodwork in the room or hallway where it is placed.

Colorful are the modern heating plants, beautiful as well as efficient.

Illustration courtesy of Richardson & Boynton Co.

Warm Houses Are Comfortable Homes

The new home structure, whether it be the pretentious mansion or the suburban cottage should be substantially built and glow with color within and without. Attic and bedchamber, bathroom and hall, living room and basement reflect the higher standards of materials and workmanship, and above all show the present-day tendency to an abundance of light and color.

This is particularly true of the modern basement which has been transformed from a storehouse for the cast-off materials of the household to a bright and cheerful place in which to live.

The basement today provides space not only for the laundry and the heating plant but for the children's playroom, the billiard table and the workshop. Bright and cheerful colors are used in profusion in the basement, and the heating equipment forms a dominant note in this new color scheme.

But a heating plant must be more than attractive and colorful. While it must not detract from its surroundings—in fact must add to them, be a harmonious part of a pleasing ensemble—a heating plant's first duty is to be efficient and economical. It must do well the work it was designed and built to do.

A cold house can never be considered comfortable, and attractiveness and convenience receive little consideration from the occupants of a chronically cold house.

The well built house, and this means thorough insulation, and good construction throughout, will offer no difficulties from the heating standpoint if the heating system installed is adequate for the purpose, properly designed and installed and the correct fuel is used.

Design and manufacture of heating equipment have kept in close step with architectural design, and building materials and construction methods. It is an easy matter to select the heating plant that will exactly fill any need and desire from the large range of types, sizes, designs and prices. Cottages or mansions, city, suburban or country homes can all be efficiently heated.

The Livable Modern Basement

Illustration Courtesy of American Radiator Company

Only a few years ago the model basement was a novel idea, introduced as a sort of "stunt" in a few expensive houses. The plan proved so desirable that today the finest homes in the country are being built with their basements designed to be a livable part of the house—for play room, recreation room, den, work room or model laundry. In smaller homes, where the added expense of an elaborately decorated basement is not desirable, it is only a matter of practical forethought to be sure the cellar is of waterproof construction and the heating plant one which will keep the air free from dust and unpleasant gases, in case of later conversion.

In the past, the cost of basement space always has been proportionately as much as the cost of the rest of the house. The return on this investment, however, in realty and rental value and in comfort was practically zero, for 60% of the basement was waste space. It was only with the advent of modern heating that architects began to see possibilities in the lowest story. The new boiler, with its colorful jacket, its dust-proof and gas-tight construction and graceful lines, seemed to demand an improvement in the surroundings. There was no longer any reason why the basement should not have its rubbish cleared away, its coal relegated to a separate compartment, and the basement proper be transformed into a useful part of the house.

The first and most obvious use was as a laundry. Modern improvements make washing an infinitely more pleasant operation than it used to be, and a clean, dry basement with good lights adds greatly to the enjoyment of the task. Housewives find wash day much brighter, with a brighter, cleaner basement.

The next developments were the work room and the rainy day play room. With good lights, a work bench, and tools, a hundred household jobs can be accomplished. And with modern casement windows and insulated lumber, the cellar is converted into a pleasant, convenient place for the children to while away stormy days.

Today many a re-formed basement is equipped with a floor lamp or so, comfortable chairs, an old couch, magazines—perhaps a radio or phonograph. Warm and cozy, with the bright gleam of the boiler a cheerful spot of color, the cellar is often the most popular place in the house for winter evenings.

In larger houses, where the basement is designed from the start for living quarters, a fireplace is often put in, side lights, panelled walls, painted floor and ceiling, and casement windows especially designed to admit as much light as possible. Often the basement finds excellent use as a game or trophy room. It is the vogue to receive guests here, for the possibilities of novel decoration and entertainment are unlimited, and the space uncluttered. The upper rooms remain orderly and undisturbed throughout a party, with a vast saving of household work and unnecessary labor.

The daylight model basement is not a dream of the future. It is with us right now and is destined for even a brighter future. It is extremely surprising how easily the basement can be developed into a really useful, livable place, thereby utilizing valuable space that was formerly wasted.

Undivided Responsibility

Where is the person buying an automobile who would purchase a certain make of carburetor, a certain make of radiator, wiring system and so on, and have his car assembled? He buys a car whose parts are designed by specialists to function as an efficient unit.

In the past, such has been the custom in the purchase of heating equipment. A boiler from this company, radiators from that, valves and other accessories from a third. No wonder, when the plant was assembled, there was often imperfect coordination among the parts. Yet the difficulty was sometimes hard to locate and the responsibility for the trouble impossible to place.

Conscious of this complaint on the part of the public, and of the real need for *undivided responsibility,* manufacturers of heating equipment have made it possible to buy boiler and radiators together as a unit. This centers all responsibility on one manufacturer, and he guarantees the heating plant in its entirety.

The success of a heating plant depends largely on its accessories. The best boiler and radiators may be handicapped by inferior valves. For this reason it is important that accessories be used which have been made especially for a particular radiator. It will mean greater efficiency, for each accessory has been designed to play its part in the development of the highest efficiency for the whole plant.

The Partial Vacuum Job

A recent step forward is the conversion of the one-pipe steam system—the least expensive radiator heating system—into a partial vacuum job. This is very easily accomplished by applying good vacuum accessories and taking care that the system is made up tightly, so there are no leaks. A simple illustration will point out the advantages of this type of heating.

Let us apply heat to a container partly filled with water. When the water reaches 212 degrees it boils and gives off steam, and after it has boiled long enough for the steam to drive out all the air, we will turn down the fire and seal the container. As the water cools, the steam pressure drops and a vacuum is created.

When we again apply heat, the water boils considerably below 212 degrees, for the vacuum has reduced the air pressure, and as the air pressure is lowered so is the boiling point.

This is what happens in the one-pipe steam heating system made up for vacuum. The steam is generated in the boiler and rises to the radiators. As it enters, the air is driven out through the air valves, which close as soon as the hot steam comes in contact with them.

Then as the fire dies down and the steam pressure drops, the vacuum air valves seal and prevent the return of air into the system. Thus a partial vacuum is created and heat is retained for hours after the fire is banked. This effects a saving in fuel that in a short time will more than pay for the cost of the vacuum equipment. And with a partial vacuum there is the added comfort and convenience of being able to heat the rooms in a much shorter time. The radiators heat almost instantly, for the steam does not have to drive out a lot of air. A line of accessories has been developed that permits the buyers of inexpensive one-pipe steam jobs to enjoy the benefits of this improved type of heating, at very low cost.

An Investment in Health

Experiments conducted by the Health Department of the United States disclose the fact that in most homes the relative humidity during the winter season is much too low. It has been proved that a relative humidity of 45 to 50 per cent at 68 to 70 degrees Fahrenheit is most healthful and comfortable.

It is only a few generations ago that a temperature of about 55 degrees Fahrenheit was thought comfortable. But in those days every home had a great open fireplace with a kettle swinging from the crane. Later, when stoves overheated the surrounding air, leaving the rest of the house cold, the kettle still sang its song from the stove, sending up a little cloud of moist steam to permeate the atmosphere.

Today, however, the average home has no simmering kettle to keep up the humidity. It is necessary that some heating system be provided which can warm the house adequately and at the same time preserve the moisture content.

It can readily be seen that radiator heat fulfills this function. Because the heat is supplied from a number of units, one of which is placed in each room, the air is warmed to a moderate temperature, instead of the violent heat necessary in the case of one heating unit for the entire house. The lower temperature makes the atmosphere incapable of holding an excessive amount of moisture, so that the normal humidity of the air is preserved.

It has been proved that over-heated air irritates the delicate linings of the nose and throat, rendering them easy prey to infection. Harsh, dry heat also encourages disintegration of floating organic matter and liberates harmful gases and products of combustion. A large percentage of the common colds and other ailments of winter can be traced to improper home heating methods.

It is now possible to purchase a radiator heating system, steam or hot water, which is guaranteed to provide 70-degree warmth in every room, in spite of weather conditions. This temperature has been found the most healthful and comfortable for homes, since it permits the proper amount of humidity, and is neither too high nor too low for efficient activity and relaxed comfort.

Here is a fireplace that burns perfectly, without smoke, and gives double heat from same fuel. There is a built-in inner chamber which collects waste heat and sends it into the room. Cold air enters this chamber near the floor (note grille showing beneath the bench), is heated and sent out through the grilles indicated over the mantel shelf. There is no waste of fuel or heat.

Well Built Fireplaces Add to Home Comfort and Value

Illustrations Courtesy of Heatilator Company

Fireplaces are now built with absolute assurance of perfect operation, absence of smoke, and double heat from the same fuel.

The theory of correct fireplace construction has been well established, but the application of it has been so prone to the variances of individual circumstances that sometimes a costly fireplace, built by masons of experience, still has not proven entirely satisfactory.

There has been developed a double-wall metal form of scientific design and construction around which the fireplace masonry is laid. This comes in one complete unit up to the chimney flue. The firebox, damper and smoke chamber are all a permanent part of the unit.

The inner wall serves as side, back and top of the fire box, so that no firebrick is required except for the base.

Passages are left in the outer masonry for the introduction of cold air into the chamber between the double walls, and for the outlet of the same air after it has been heated.

Thus, heat ordinarily wasted in the brickwork or chimney is saved and sent into the room. This is equivalent to the heat of a large warm air furnace register so that a fireplace built with this unit provides two or three times as much heat, from the same fuel, as an equally large fireplace without it.

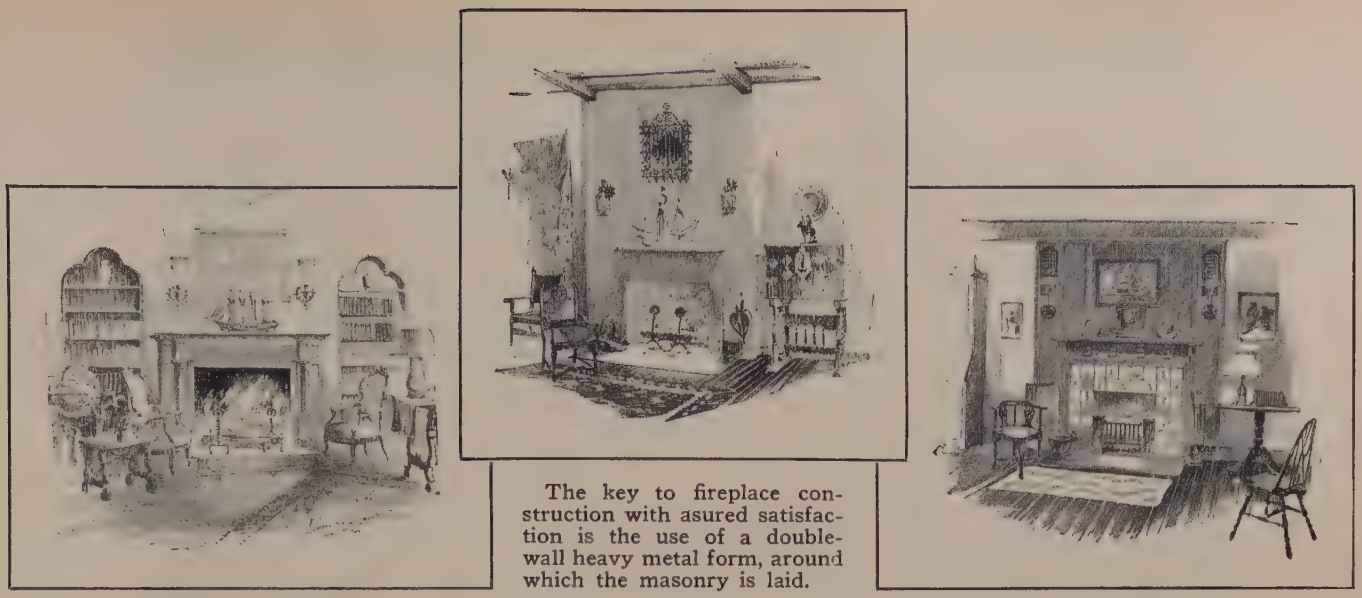
The saving in labor and material practically covers the cost of the unit itself, while the saving in fuel means a saving in money whenever the fireplace is used.

But, even more important, a perfect draft is assured and there is no chance for any smoke to come out into the room when the fireplace is used.

These results have been proven by experience in thousands of installations.

This unit comes in many sizes and is adapted to any type of architectural design.

Various stock grilles are provided for the cold air intakes and warm air outlets. Or, special grilles can be used if preferred. Sometimes grille effects are designed as part of the masonry itself.



The key to fireplace construction with asured satisfaction is the use of a double-wall heavy metal form, around which the masonry is laid.

No one questions the usefulness or comfort of a modern fireplace. It brings a distinctive charm to a room that might otherwise be cheerless.

Many home owners are not content with a single fireplace in the living room. They have them in bedrooms, reception halls and in libraries, too.

And, the basement recreation room offers a splendid opportunity for installing a big massive fireplace where a rousing crackling fire is easily and quickly kindled and kept alive throughout the day with wood or coal.

There is an unusual appeal about an open fire. Perhaps it is the multicolored flames that dart and shoot in tiny spears of cheering light. Perhaps it is a memory of our childhood days with the fascination of controlled fire. Or a harkback to the days of the cave man whose only source of comfort was his crude open fire built to bring warmth to his body and protect him from the beasts of prey who prowled about his cave at night.

Shows how the unit may be used with grilles in the sides of the fireplace.

Beauty at the *Visible* End of Heating Equipment

Illustrations Courtesy of Tuttle & Bailey Mfg. Co.

This is an age of beauty. Among practically all classes there exists an active sensitiveness concerning interior decoration. Many items of home equipment that were formerly acceptable, despite a drab and even discordant appearance, are no longer tolerated. And many manufacturers, aware of this new trend, have embellished their products, adding beauty to things that were formerly useful only. Others have introduced entirely new creations that serve to obscure the undesirable of indispensable items.

The warm air register is one good illustration of this new treatment and the Radiator Cabinet, or enclosure, is another.

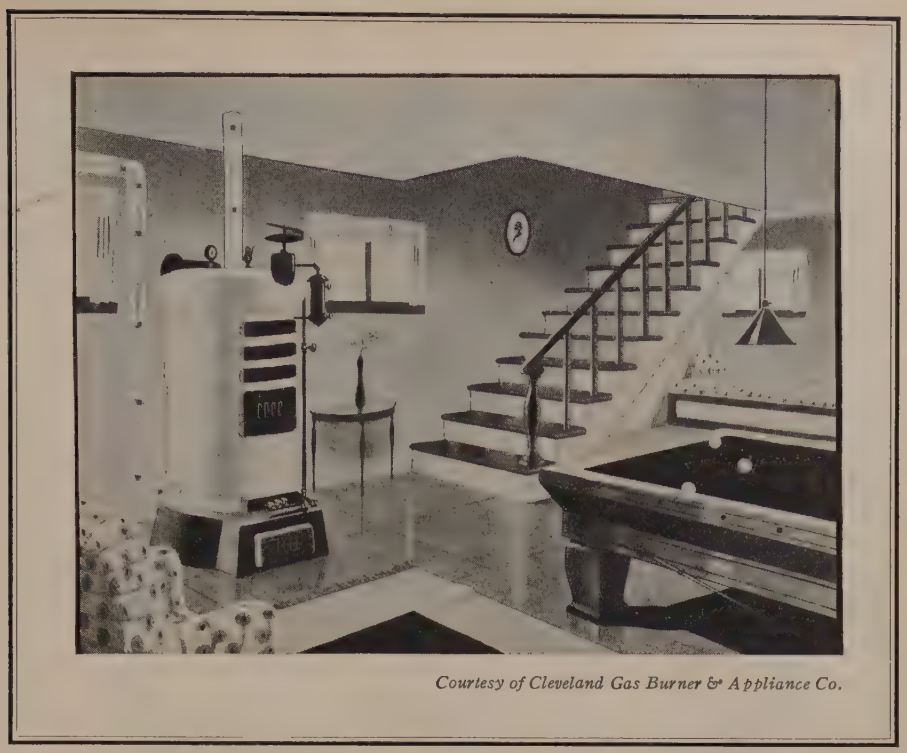
Warm Air Registers

Incidents to the warm air heating system are its registers. These function as the heat outlets and cold air intakes. They are necessarily exposed to view in the rooms of a home, making their appearance a matter of much importance. Yet the common practice had always been to install either a plain black japanned or glaring white register. Today, however, it is possible to secure registers finished in shades wholly in keeping with the modern trends of interior decoration. Manufacturers have introduced lines of beautiful finishes that really makes the register an asset rather than a destructive decorative element. Instead of throwing out the register in discordant relief, these new finishes **neutralize** its appearance and greatly promote harmony among the home appointments.

Radiator Cabinets

Radiator Cabinets no longer require introduction. They have been and are being adopted so widely that most people are aware of their decorative and useful features. Though primarily designed to mask the clashing metallic appearance of bare radiators, they have carried along many other benefits.. These are, briefly, the protection afforded walls and curtains against radiator heat smudge; the humidifying of indoor heated air, thus safeguarding health and preserving furniture. As radiator cabinets divert the heat currents from a direct upward flow to one traveling **outward**, home heating is made much more effective and economical.

Therefore, this seeking of greater beauty is bringing even more than the desired results. It is realizing many benefits that were not thought of until they came along as attendant elements and were recognized as highly valuable considerations.



Courtesy of Cleveland Gas Burner & Appliance Co.

The Luxury and Comfort of Gas Heat

You can now have a gas heated home without having to buy a new specially designed gas furnace or boiler. You can now enjoy all the many advantages of gas for house heating with any good type of furnace or boiler primarily designed for burning coal—by simply installing one of the new Automatic Gas Conversion Burners.

The initial cost of installing one of these Automatic Gas Conversion Burners is comparatively small, and the results are entirely satisfactory, not only from a heating point of view but also in respect to operating costs. Repeated tests show these burners develop efficiencies from 75% to 83%, which are on a par with that developed by the best specially designed gas fired equipment.

The installation of these burners is very simple and the work of only a few hours. They completely convert your coal-burning equipment into a safe, efficient, and dependable automatic gas heater.

If you are considering gas heat for your home, you should investigate the advantages these conversion burners offer.

Everyone admits that gas is an ideal fuel for house heating. No other fuel compares with it. Automatic gas heat ends all house heating worries, and the new automatic gas conversion burners put gas heat within the reach of practically every home.

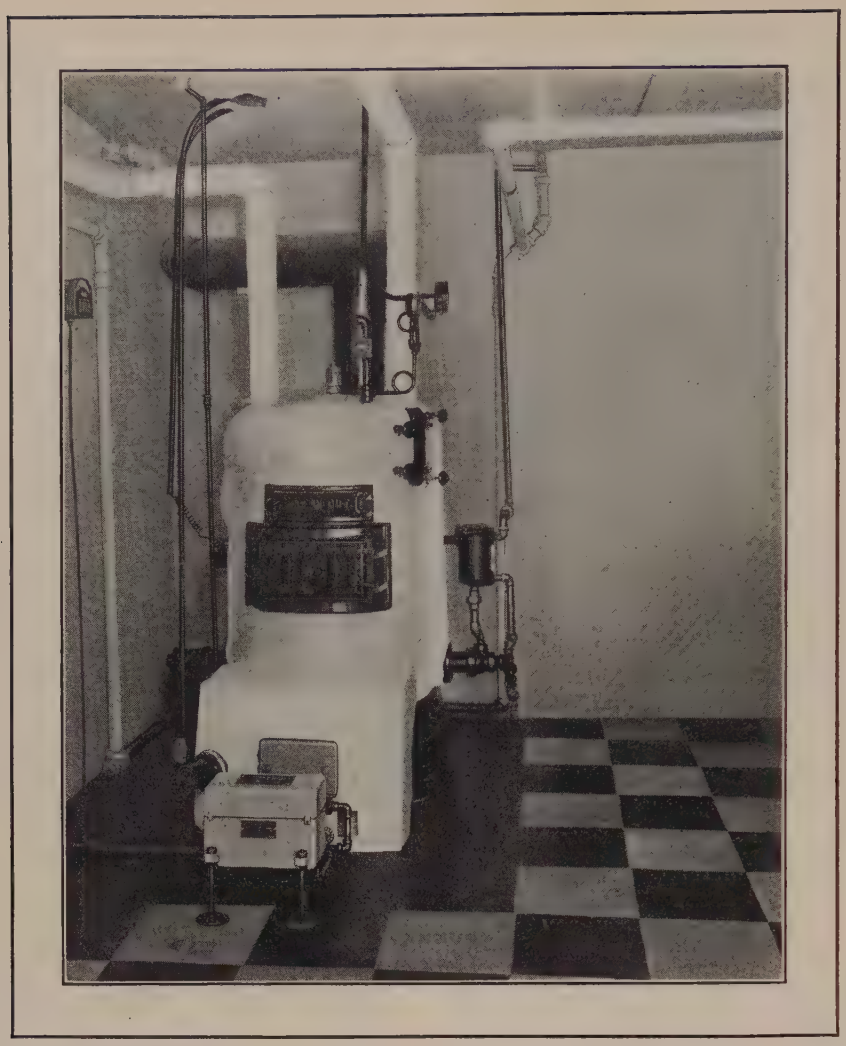
Your home will never be completely modernized until you have brought your heating system up-to-date. The new automatic gas conversion burners make it possible for you to enjoy modern automatic gas heat at the lowest initial cost.

Gas is the cleanest of fuels. Its heating value and price are definitely fixed, and always at your service. These automatic gas conversion burners give you the luxury, comfort, and convenience of clean automatic heat—with uniform room temperatures day and night. One match to light it in the fall of the year is all the attention it requires until the following spring, when you turn the valve that shuts off the gas for the summer.

You don't have to pay for gas until after you have used it—and your cellar is converted into clean, comfortable quarters, where it is easy to arrange additional rooms that will make the basement as livable as any other part of the house.

A clean basement offers the ideal spot for a recreation or billiard room, a playroom for the children. A light, clean, comfortable workshop for father or the boys. Even an additional lavatory, a shower or bathroom can be easily installed here.

Basements are quickly changing from dark, dingy dirty storage places into light, clean and airy comfort spots, and modern heating methods have been the instrument to bring about this satisfying and wonderful change. Truly gas heat works wonders in a home.



Heating Your Home With Oil

Illustrations Courtesy of International Burners Corporation

The last decade has seen remarkable progress in developing labor-saving and comfort-giving devices for the modern home. We have automatic lighting, automatic refrigeration, mechanical washing machines, electric ovens, vacuum cleaners, dish washers, toasters, irons, incinerators, and many other types of equipment which have increased tenfold the joy of living. The latest development has eliminated the most unpleasant and the most neglected task relative to home life—the problem of heating the home cleanly, efficiently and automatically.

The development of the oil burner has been more or less rapid, in fact, so rapid that it is not fully understood by the public in general. The oil burner is not always considered a necessity because its benefits are not yet fully understood.

Notwithstanding this, however, today many cellars have been converted into clean, bright basements with cheery recreation or play rooms. And, as might be expected, in keeping with this modern trend to add further beauty to this extra room, oil burner manufacturers have laid more importance on the appearance of their equipment. Some manufacturers are finishing their burners in attractive colors to be in perfect keeping with the styles of house finishes. This has helped to get the approval of the feminine branch of the prospective buyer's household.

The average man considering an oil burner often wants to buy the cheapest burner possible. He is confounded and perplexed by each salesman he interviews for they generally tell different stories. Seldom does the prospective buyer realize what he should expect from an oil burner. The warmth of his home, the health of his family and the preservation of his furnishings depend upon the satisfactory performance of his oil burner. It really has an important and very responsible part to play in the life of its owner! This being true, it is necessary to select carefully and wisely and not to be guided by the feeling that "it is something that goes in the basement" or by looking for the cheapest equipment. In the long run, you will purchase in value and performance only what you pay for.

The oil burner is not a perpetual motion machine. It is a mechanical device developed to produce a condition in your home that everyone will appreciate—an even temperature at all times automatically controlled. But, it is still a piece of mechanical equipment and any piece of machinery requires some attention now and then. The sewing machine, typewriter, automobile, or radio all need attention once in awhile. So does your oil

burner! That is the first important fact to realize when purchasing an oil burner.

The oil used for residence heating is not crude oil. It is crude oil after the naptha, kerosene, and gasoline have been removed. This oil is divided into two grades —furnace oil and domestic fuel oil. Furnace oil is a light oil, easily ignited and burned, costing slightly more per gallon than the domestic fuel oil. Domestic fuel oil is a heavier oil containing more heat units per gallon than lighter oils and produces thorough satisfaction when used by a burner designed for and listed by the National Board of Fire Underwriters, to use this grade. Both of these oils are readily available in practically every locality.

A careful investigation of the companies manufacturing oil burner equipment and the questioning of those home owners who have used oil burners for two or three seasons, should materially aid in the selection of the type burner best suited to your requirements. There are many excellent burners on the market and they are no longer a novelty. Well over half a million homes in the United States, large and small, are now using oil heating equipment.

An oil burner will give you a constant, even temperature, producing the most healthful and livable conditions possible in your home. It does this automatically, starting and stopping only when it is ordered to do so by the temperature regulator placed in your living room, hallway or in some other desirable location.

In early fall or late spring; on rainy, chilly, damp days, an oil burner will quickly take the chill off the house without the necessity of going to the basement and building a fire. Any temperature you desire is available.

A burner can be attached quickly and easily to your present furnace or boiler, providing this equipment is in first class condition and of sufficient capacity to adequately handle your requirements. An oil burner will not cure a faulty heating system nor successfully heat a home which cannot be heated by other methods. But, if given a fair chance, it will produce an even, healthful temperature, with a minimum of attention and at the same time eliminate dirt and dust, and all other inconveniences. An oil burner will give the greatest satisfaction and comfort with very little additional operating cost and in many instances below the cost of heating with anthracite coal.

Oil storage tanks can be buried in the front yard or in a parkway between the sidewalk and roadway, or in a driveway, or in fact in any place for convenient servicing from the tank wagon. Here they are completely out of sight and do not detract in any way from the surroundings.

In this way no fuel is stored in the house and the space formerly used for fuel storage can be put to other uses. The basement can be made a livable part of the house with a convenient recreation room or playroom for the children. A handy workshop, or used in numerous other ways. In the really modern home the complexion of the basement has changed. No longer is it a place to be closed off. Something to avoid. It has become as important, as livable and comfortable as any part of the home.

Modern Basements Utilizing Every Foot of Space Replace Old Cellars With Their Waste Areas

Thousands of years ago, before Noah built the ark, the cave dwellers had the right idea—an idea that suited their era and method of living—they "dug in" for warmth.

Every inch they went below the soil was an inch of additional comfort, of added protection from the whims of the weather, cold and heat alike. So they dug deep.

Perhaps it is a throw-back to our remote ancestry that made us put cellars under our houses, for surely we have made very little use of them until recently.

Modern heating methods, fuels, and equipment have had a lot to do with the rehabilitation of cellars. Coal, gas, oil and water heating is a decided advantage, from the efficiency standpoint at least, over the old fireplace way. These fuels made central heating possible. And, central heating gave birth to the modern basement.

For a long time basements have been devoted entirely to heating, laundry work and storage space. It is only recently that people have come to realize the possibility of actually using the basement for livable rooms—for delightful recreation rooms, as a billiard room, dancing salon, children's playroom, library, and many of the other rooms in such vogue right now.

With a small expenditure the old basement can be converted into a beautiful and comfortable part of the house. Floors can be treated and covered with rugs or other floor material, just as the upstairs rooms are handled. Walls and ceilings can be decorated, painted, art plastered, and given many unusual and pleasing treatments. One can easily make the basement a place to be proud of and used rather than a place to be shunned.

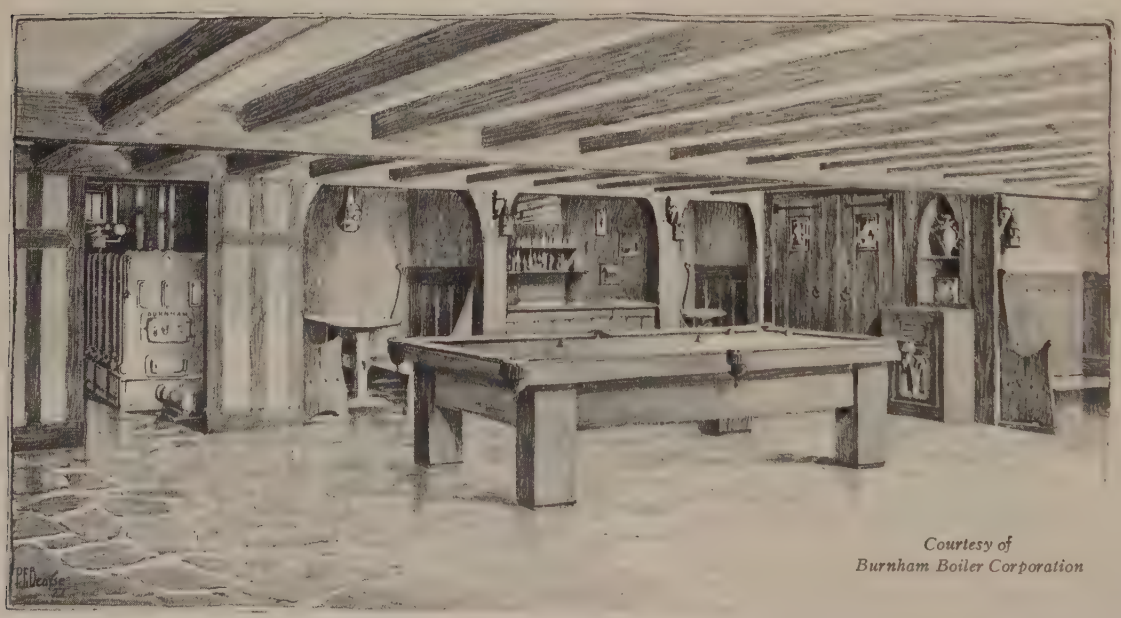
A model laundry can be installed, and modern tubs and laundry equipment will help make this an attractive as well as an efficient room. The family washing can be done under sanitary and healthful, and even pleasant conditions.

Here, too, is a splendid place for a toilet and lavatory, a shower, or even a complete bathroom. Modern living calls for more than a single bathroom in even the most modest of homes and sometimes it may be difficult to find a suitable spot for an additional bathroom on the floors above.

The modern heating plant lends itself readily to dressing up the basement and making it a valuable spot in place of just a basement. And, now, basements are easy to keep clean—just as inviting, just as comfortable as any other portion of the home.

Don't overlook the basement when you build a new home or remodel an old one. Here is space that can be made infinitely more valuable by a little thought and effort and a comparatively small outlay. Make an investment in added comfort and convenience, add to the value of the home. It will be much pleasanter to live in and much easier to sell, should you wish to, at a higher price.

Notice this model basement with its modern heating plant, its attractive ceiling and walls, artistic lighting arrangement —where could one find a more pleasing room?



Courtesy of
Burnham Boiler Corporation

The Efficient Basement Laundry

Illustration Courtesy of Alberene Stone Company

The modern laundry is keeping pace with the modern basement that has changed from a dingy, dismal place to a bright, sunlit, cheerful spot. An appreciated part of the house—a livable part of the home.

In summer, modern windows can be thrown open to the whispering breezes—and where, on hot summer days, is there a cooler spot in the house than the basement? In winter, no warmer place. Where could be found a more ideal and comfortable place for the family laundry—a model laundry?

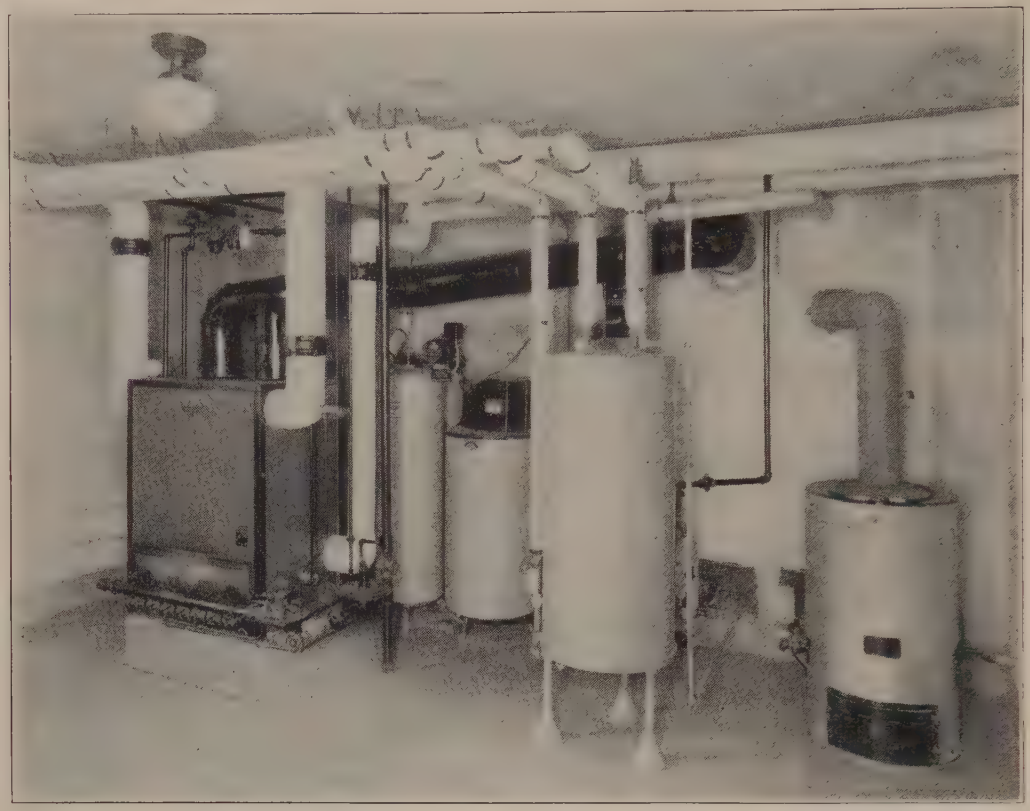
A room light, and refreshingly airy—or cozily warm, depending upon the season of the year. A place where the family washing can be easily done under the most sanitary and healthful conditions.

Think of sweetly-clean, odor-free tubs that will not rust or discolor. Tubs that will not absorb oil, grease or acid stains. Tubs that will last a lifetime.

And color can be brought to the laundry too in equipment that will harmonize with the surroundings; that will blend with the coloring of walls and floor covering —or contrast in a pleasing way. Laundry tubs, washing machines, ironers—all of those things that do their part in keeping the family supplied with clean clothing, with snowy linens, with soft, downy blankets can be just as colorful, just as attractive in their way as other household equipment.

The basement laundry has changed. No longer is it a place to be hidden away in a dark, damp cellar. It has taken its place with the new basement, and the new attic. Now it is something to be proud of. It can be attractive, convenient, comfortable and sanitary as well as useful.

The modern laundry in the modern basement has replaced the washtubs in the cellar.



Courtesy of Home Incinerator Co.

The Basement May Now Be the Cleanest Part of the House

With modern automatic heating devices, mechanical refrigeration, motor-driven laundry equipment, and portable, gas-fired incinerators, there is no longer any excuse for making the basement a gloomy catch-all. The basement of today with these up-to-date appliances can be as spotless as the kitchen or the bath, and with just as little trouble to keep clean.

With cleanliness has come larger uses for this long-neglected part of the dwelling. Well illuminated, with smooth concrete floors and painted walls, it is the logical playroom for the children. It offers a workroom for father, a sewing room for mother, and many of the smaller modern homes which must conserve all the space possible have placed the maid's room and bath here.

With new possibilities for the basement, architects and builders now include the full basement since it adds another floor to the home and gives the home builder a greater return on his investment.

The basement of a generation ago, then commonly called "the cellar," was so dirty that doing the laundry in such a place was unthinkable. Mothers had an aversion to letting their children play there, knowing they would emerge looking like Topsies. If the canned fruits and vegetables were stored there, it was an adventure to stumble through the dusk over the lawn mower, broken bicycles and scores of things which were placed in the basement to get them out of the way. Certainly there was no inducement then for the home owner to brag about his basement or invite visitors down to see it. Now all that is changed.

Modern heating equipment occupies little space today and a small room is all that is necessary for the entire unit. The modern family laundry is easily housed in another small room and relieves the household from the weekly disruption of "wash day." Above stairs they need not know that this necessary operation is in progress. The water heater, the incinerator which eliminates garbage, trash and rubbish as fast as it accumulates, and the other time and labor-saving aids of the modern home may be effectively included with the heating device.

The builder today plans his basement as carefully and thoughtfully as any other floor whereas in the past it was a *terra incognito* that he knew existed and which had its uses, but about which the less said the better. If the entire basement was not excavated or finished, then there was just that much less to bother.

With large windows and electricity, there is illumination for all hours of the day and night. The children are safe off the street, the older boys can tinker at a work bench and mother can come downstairs from the kitchen to slip the parcel of garbage into the incinerator without the risk of a broken neck, while she can locate fruit and vegetables without the aid of a guttering candle. Much work and annoyance is saved the housewife who possesses one of these modern basements; and in short, the whole life of the family has undergone a change for the better with the emancipation of the basement.

A modern basement interior with a view of the incinerator doors in the brick combustion chambers in the left background.

Courtesy of Kerner Incinerator Company

Disposal of Garbage and Rubbish by Incineration

An incinerator to provide instant, convenient and sanitary disposal of garbage and all household rubbish, is one of the outstanding conveniences for homes developed in recent years—a convenience that is now considered as essential to the up-to-date home as modern plumbing, because it relieves the housewife of one of her most distasteful and disagreeable tasks.

It is not only the disposal of food refuse that presents a problem in the modern home today. The rubbish and trash pile in the basement or other parts of the building receives its offerings each day and these accumulations are not only fertile breeding places for disease germs, but an ever present fire hazard, accountable for two-thirds of the fires that occur in residential construction.

The Chimney-fed Incinerator destroys, by burning all garbage and waste in the home where it is created—and without the use of gas or other commercial fuel. It eliminates unsanitary garbage disposal methods and hazards from rubbish piles. It lightens the work of the housewife. It contributes much to the cleanliness of the home, and the living comfort of its occupants.

All household waste—not only garbage, but old papers and trash, sweepings or dust from the vacuum cleaner, wilted flowers, tin cans, bottles—in fact everything that is no longer wanted, is dropped into a receiving hopper door located in the flue, falls down the flue to the incinerator in the basement, where it spreads out on the grates into a more or less separated and loose pile, permitting the constant flow of air up the by-pass flue to circulate through and around the moist material, thus causing a surprising amount of evaporation between burnings. When the incinerator is nearly full it is lighted by a match and the whole mass burns without further attention. It burns from the top downward (on account of the by-pass flue) and all unpleasant odors are destroyed. After several burnings the ashes along with the flame sterilized tin cans, bottles and other noncombustibles are dumped into the ash pit and taken out with the ashes.

The grates in the basement incinerator chamber are so arranged as to insure a minimum amount of gas or smoke during burnings. At the side of the horizontal grates on which all refuse falls, is a vertical grate called the by-pass grate. Behind this is the by-pass or secondary flue. During burnings the air comes up the by-pass flue, passes through the vertical grate and feeds heated oxygen to the top of the fire. The fire is always at the top of the burning material. As it liberates the gases from the material underneath, these gases pass up through the flames, are mixed with a plentiful supply of heated air at that point and are consumed. All garbage and waste is disposed of with no extra fuel cost, and no chance of heat, smoke or odor escaping into the building—always a clean, sanitary condition.

There is also the Basement-fed Incinerator for existing homes, also new homes where provision cannot be made for a chimney flue in or near the kitchen to accommodate the Chimney-fed type. All garbage and rubbish is deposited in the Basement-fed Incinerator through a feeding door placed in the upper part of the brick combustion chamber. The basement combustion chamber on this type is also built with the vertical by-pass grate with a by-pass flue behind it—as described above for the Chimney-fed type. With the exception of hopper doors on upper floors of the building the Basement-fed installation is the same as the Chimney-fed type.

Compare this modern method of garbage and waste disposal with untidy, inconvenient old-fashioned methods. Eliminate the rubbish pile with its dangerous fire hazards and menaces to health—and you can readily see why the incinerator is so much appreciated by the housewife and why more and more progressive builders are incorporating this feature in their houses as an added appeal to prospective home owners.

Illustration courtesy of
Farley & Loetscher
Manufacturing Company

Illustration courtesy of
The Marschke Company

The Modern Disappearing Stairway

Disappearing stairways have proven exceedingly popular in home construction because of the many advantages they offer. They save space, are easy to operate, are very dependable and offer the greatest convenience.

The disappearing stairway will make any house more modern and more convenient and comfortable to live in. In a few hours' time any carpenter can easily install one in either a new home or in a house that is being brought up-to-date through modernizing.

It is so simple that even a child can operate it and it is only a question of seconds to bring it into position for use, or place it behind its storage panel in the ceiling where it is out of the way, and entirely out of sight.

A disappearing stairway can be placed in a hallway or room and is always ready for immediate use.

It affords easy and safe access to the attic that is used as storage space or in the modern attic where bedrooms, a playroom, sewing room, study, den, an additional bathroom, or other living rooms have been arranged.

Disappearing stairways add much to the value of a house both in the way of convenience and in property value.

They are an important part of modern house construction. An investment that pays for itself over and over again. An appreciated addition to any home, large or small, bringing added convenience and greater comfort for a modest outlay of money.

The Modern Electric Stairway

Disappearing Stairways have proven exceedingly popular in Home Construction because of their space-saving value, convenience, ease of operation, and dependability

Illustration Courtesy of the Bessler Disappearing Stairway Company

And now, the disappearing stairway has been motorized! It has joined that much appreciated class of modern conveniences that operate *"at the touch of a button."*

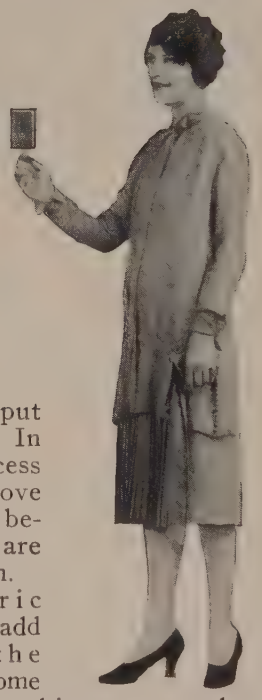
This new Electric Stairway can make every home more modern. More convenient. More valuable than ever before. A touch of the finger on the button (just as one touches the switch for electric light) and a concealed electric motor automatically opens a panel in the ceiling and the stairway lowers into position for use, or is elevated into out-of-the-way storage position behind the ceiling panel which then automatically closes.

When the stairway is at rest in either position (to use in ascending or descending, or in storage) the motor automatically stops. It takes but 35 seconds to bring the stairway into position for use, or store it away.

Any child able to reach the button, can operate the stairway because there is nothing complicated in its construction, and no delicate parts or adjustments to easily get out of order.

In a few hours time any carpenter can easily install it in either a new home or a house that is being brought up-to-date through modernizing.

Aside from its unusual convenience, the Electric Stairway also provides a safety device for the home, in this way. Should a dangerous character enter the home, the occupants of the house can go up stairs, press the button so that the stairway will follow (into its storage position) then throw off the switch that disconnects the press button below, making it impossible to operate the stairway from below until the switch is thrown in again (from above) and the motor put in operation. In this way all access to the floor above is cut off from below, and they are safe from harm.



Stairway half way down. Simply pressing the button brings the stairway into position for use or places it in storage position behind the ceiling panel.

The Electric Stairway will add materially to the value of the home both in comfort and in property value.

The stairway can be placed in a hall or room as it is always out of the way when not in use. It affords easy access to the attic that is used as storage space or to the attic in which sleeping rooms, playroom, an additional bathroom or other living rooms have been arranged for.

It can be used to advantage in the compact home or the palatial home and will pay for itself many times over in comfort and convenience and in that satisfied feeling that comes to the owner of a modern home that lacks none of those conveniences that make life worth while.

The newest conception of telephone comfort is telephones throughout the house, wherever they are needed for ease in placing and answering calls. Photograph courtesy the American Telephone and Telegraph Company.

For the Modern American Home This Newest Conception of Comfort

The American home has proved that convenience does pay.

Great industries are devoted to producing time and labor saving devices for it. Inventive genius . . . skilled craftsmanship . . . the highest principles of production . . . all go into the making and furnishing of it.

The American home must be modern. It must be convenient. It must be comfortable.

And the newest conception of comfort is *complete telephone convenience* . . . telephones throughout the house, wherever they are needed, for ease in placing and answering calls.

A telephone in the living room, of course. And in the kitchen, and the upstairs bedrooms. And telephone outlets elsewhere, to make service available wherever desired . . . in the sun porch, for instance, and the dining room; in the guest chamber, the basement (when it is utilized as a game room or amateur workshop), the servants' quarters, the library, the garage.

Telephone service should be fitted to the individual requirements of each house. Many families nowadays want two telephone lines—one for the exclusive use of the family, and the other for the servants and the conduct of household business.

Additional telephone equipment is available for special purposes: switches and push buttons, for intercommunication among house telephones; bells, lights and other signaling devices for special purposes; portable telephones for plugging into jacks at convenient places; switches for temporarily disconnecting the servants' telephone.

Few things are more essential to the livability of a home than *enough telephones*, conveniently placed. People more and more are demanding this added comfort.

The time to plan for telephone arrangements is when a house is being built or remodeled.

Conduits for telephone wires can then be installed within the walls, adding to the general appearance of the house, by rendering exposed wiring unnecessary. The protection thus afforded the wires guards against possible future interruption of service.

Telephone outlets can be planned so as to take care not only of immediate requirements but of future ex-

Built-in locations for telephones, directories and bell boxes can make attractive decorative features. Photograph courtesy the American Telephone and Telegraph Company.

Complete Telephone Convenience Planned in Advance and *Built into* the House

pansion or rearrangement of service as well. Outlets in every room are often considered desirable.

Built-in locations for telephones, directories and bell boxes make an attractive decorative feature in many instances.

The dining room telephone, because of its central location, is convenient for use not only in the room in which it is located, but also from the living room and kitchen; the bedroom telephone is immediately accessible to the occupants at night and may also be used by members of the family at other times when privacy of conversation is desired.

The living room telephone is in a convenient location for comfortable day and evening use; the bedroom telephone is readily available in case of sickness, alarm, or other emergency situations at night; the kitchen telephone permits prompt answering of incoming calls and is useful in the conduct of the household affairs, such as marketing.

The other telephone outlets are suggested in the interest of greater comfort and flexibility in the telephone arrangements. They provide alternate or additional locations for telephones if and when desired. By locating telephone jacks at these places, for use with a portable telephone, service could be provided in the rear bedroom when it was occupied by guests, or in the dining room, which would make possible a certain amount of privacy in conversation when the living room was occupied by others.

The Bell System is distributing two booklets which outline desirable facilities for telephone wires and apparatus, and illustrate appropriate arrangements of telephones in different types of residences and buildings. Copies of these may be obtained from the business office of your local Bell company.

As each house presents its own particular problems, it is advisable that those interested in building projects consult freely with representatives of the telephone company. This consulting service is available without charge.

Complete telephone arrangements add tremendously to the livability of every home. They mean a world of comfort—at very little cost.

Good Homes Deserve Good Hardware

Illustration Courtesy of P. & F. Corbin

In the house you are thinking of building, the hardware you put into it will have a direct bearing on your enjoyment of the home as long as you live in it. And, it will make it more attractive should you wish to sell it. Think of the hardware you will use as an extremely important item rather than a minor detail.

Whether you put *good* hardware into the building you are interested in, or just hardware, will have a great deal to do with the comfort and convenience of the occupants and users of the building. Hardware of the right character is far from being the cold, uninteresting thing most people think it. It is more than metal fashioned into useful shapes and mechanisms.

We live with hardware every day of our lives. We see it, admire it, if it appeals to our tastes; we touch it, handle it, and use it many, many times each day. If it is *good* hardware we do not think very much about it. Hardware that is ugly, that does not function properly we must notice.

Think how important good hardware is in the home. You feel for the door knob without thinking. The familiar knob is gone! How will you open the door? You reach for the door key—it is not there—there is no lock. How will you fasten the door at night? There are no window catches—how will you secure the windows for the night? Without hardware you could not even hang your doors because doors must be hung with butts—and, butts are hardware. See how important hardware is—but no one ever thinks about it because we are so used to it—we expect so much of it. If it is *good* hardware we take it for granted but do not think about it. If it is poor hardware we only notice it when it is out of order or because of its ugliness. *Good* hardware is as beautiful in design and finish as it is efficient.

Home owners and builders want doors that cooperate—not doors that are stubborn. They want locks that always work—not locks that go on a strike. Modern locks permit the use of a master key for front, rear and side doors, cellar door, garage. One key to open all these doors—each door with a different lock yet no one but the possessor of the master key can pass inside one of these doors without the individual key that unlocks each individual door.

Left, wrought iron fencing. Very dignified and suitable for every type of home enclosure.

Country estates, golf grounds, and other enclosures using large quantities of fencing may employ the type shown below.

Metal Fencing Protects and Ornaments

Illustrations Courtesy of Cyclone Fence Company

Metal fencing improves any property. It adds to value as well as beauty. It is a mark of distinction—it sets off your home—lifts it to a higher plane.

It affords protection and privacy. Makes it easier to keep the yard and garden attractive. Prevents trespassing. It is a dignified and inoffensive barrier against playing, running, thoughtless youngsters. Used as a back stop, it can screen from sight some objectionable feature.

Metal fencing can be procured in so many designs, both simple and intricate, in so many heights, in so many forms, that it lends itself particularly well to any use that fencing can be put to.

It may encircle the broad acres of a country estate or enclose the small plot of a modest city or suburban home.

It may surround a tennis court. Keep the smaller children safe in the yard, and intruders out. Prevent the family dog from running wild, or the chickens or rabbits from feeding in a cherished garden.

Fencing will protect a beautifully landscaped yard because, while many intruders will ruthlessly tramp across a well kept lawn or flower bed, they hesitate when a sturdy fence bars the way.

Division fences between properties can always be used to advantage.

Fences afford protection when placed alongside a terraced walk.

Placed at the street frontage they keep the "short-cutter" and "wander-walker" off the lawn.

Fencing, properly placed, performs any of its practically limitless uses equally well.

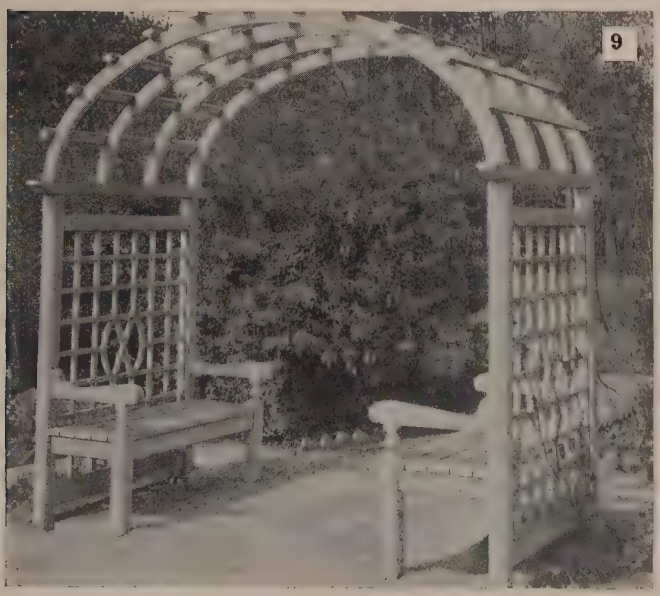
Metal fencing combines beauty and utility with long life and economy and offers every advantage that fencing can give.

Another type of safeguard fencing for city and suburban residences. Gives privacy without shutting off the view.

Your tennis court requires a substantial fence of good height. Strong enough to pull taut and retain a small mesh.

"Grounds and Garden"

Many interesting, useful, and ornamental additions to grounds and garden are available for the home builder today. Your local building material dealer should be consulted in making selections suitable to the architectural style of your home and the surrounding landscape treatment.



The Grounds and Garden

There are many ways in which the grounds surrounding a home can be improved, many methods of making the home garden more attractive.

Landscaping always adds charm to the exterior of a home and often even the simplest of treatments brings about a decided change for the better.

In some instances the desired effect may be accomplished by the addition of trees and shrubs. A spot or two of colorful flowers. A graded terrace, a sunken garden—a lily pond or rock garden. Perhaps a trellis, a pergola or vine-clad arbor.

Very often an attractive hedge or ornamental fence can be placed to advantage. Flower boxes for window, veranda or entrance way, or climbing vines will give the right touch to many an exterior.

The landscaping treatment best adapted to the particular home in question depends almost entirely upon the general style and appearance of the house, its size, location of the house on lot, size of lot, situation and surroundings.

Even the most modest attempt at landscaping will pay for itself over and over again in added charm and through the pleasure derived from well arranged grounds and a colorful garden.

If possible, decide upon the general plan of landscaping before the building of the house is started so that the earth from the excavations of foundation and basement can be used to level noticeable depressions in the lot or to build terraces. The top soil should be piled in one spot to be used later for enriching the flower beds and garden.

In a general way you can locate the ornamental fencing or hedge. Place the pergolas and garden furniture to best advantage. Settle upon the walks and driveway. Visualizing the house and garden as a whole will accomplish much in creating a harmonious and pleasing ensemble.

This is the time to plan the location of the garage and decide whether or not it will be built as a part of the house or as a detached building. If the latter, be sure that it harmonizes with the house whether you build it at the same time or at some future time, whether it sets close to the house or some distance away. A detached garage can do much to improve or mar the appearance of a home.

Consider the relative advantages of the one-car and two-car garage, remembering that the latter does not cost much more than the former to build. And, there is a lot of added hospitality when you can care for the overnight guests' car as well as for the guests themselves.

Decide upon the details of garage construction, type of doors, hardware, water supply and method of heating. Whether your garage is to be heated or not you will find it advisable to insulate it thoroughly. Many a motor has been saved (in unheated garages) from disastrous freezing during cold weather because the garage was well insulated.

Even if you figure on adding details to your grounds and garden from time to time, after your house is completed, it pays to plan in advance as far as possible.

How privacy was captured in a city

Woven Wood Fencing

Illustrations Courtesy of Robert C. Reeves Co.

One thing that should never be overlooked by the man who is building a home is the type of fencing he plans to use, for this has a great deal to do with the success of the whole undertaking.

Too many people get the house itself fixed up before they give any thought to the appearance of the grounds, and this is especially true with regard to fences. This short description of a very attractive type of fencing which has recently been brought to this country, may help therefore to give the home builder some practical ideas on the subject.

It is called woven wood fencing because the straight, live, saplings of which it is made are very carefully matched and woven together into sections which are joined together to form a veritable wall of great beauty and distinction. Nothing like this fencing has ever been seen in this country, although in France and to some extent in other European countries it is a familiar sight, enclosing some famous old estate or sheltering the garden of a *maisonette* from public view.

There are two types of woven wood fencing which recommend themselves to the attention of the American home owner. One is entirely hand-made, with the saplings woven so closely together that outsiders cannot see through. This type, which comes in sections five feet wide, is especially suitable where absolute privacy is desired. The other is made by machinery and comes in rolls, the saplings being spaced about ¾ inch apart. Though not insuring absolute privacy, this latter serves many of the same purposes as the solid fencing. Both types have great strength and durability, and require no paint or maintenance expense.

In spite of the growing use of these fences in America, they are still produced in France. They are not made in this country due to the cost of labor and the fact that chestnut has been very scarce here since the blight several years ago. In France, on the other hand, labor is cheap and chestnut abundant. Thus, despite being imported, the cost of woven wood fencing is surprisingly moderate.

For many years the French used heavy galvanized wire to bind the saplings to the horizontal braces that hold them in sections. But the saplings were so durable that they outwore even the best galvanized wire, and today they are held together with American Cooperweld wire which is shipped to France and is absolutely rust proof.

Adding distinction while screening a driveway

Cleft Chestnut fencing

The uses of woven wood fencing are varied and many. Originally, it was erected along the boundaries of large estates for the main purpose of preventing trespass, but soon it was discovered how practical and decorative a screen it made for other parts of the landscape. Today, its use has spread to the suburban home where it serves a multitude of purposes—to conceal a laundry yard, for instance, or a service entrance—to form a natural background for flowers and shrubs—to keep a neighbor's garage and driveway out of sight—to make a play stockade for children—to do a hundred odd jobs that no other fencing is capable of doing in quite the same effective, artistic way.

In its harmonious relation to the various types of architecture shown in this catalogue, woven wood fencing is remarkable. It goes with either Colonial, Modern English, French, or Western Bungalow—frame, stucco, or brick—blending as readily with its surroundings as do fine old shade trees, for like them it is an entirely natural product.

The erection of woven wood fencing does not present any difficulties. No skilled labor is required. Depending on the type, it is unrolled and stretched against posts placed about 8 feet apart, or the sections are nailed against a framework of posts joined by 2″x4″ stringers. It comes in several heights, the most popular being the 3′ 10″, the 4′ 11″, and the 6′ 6″ height. Quaint gates to match can also be obtained. These are made either curved or straight across the top, and add much to the charm and attractiveness of this interesting fencing.

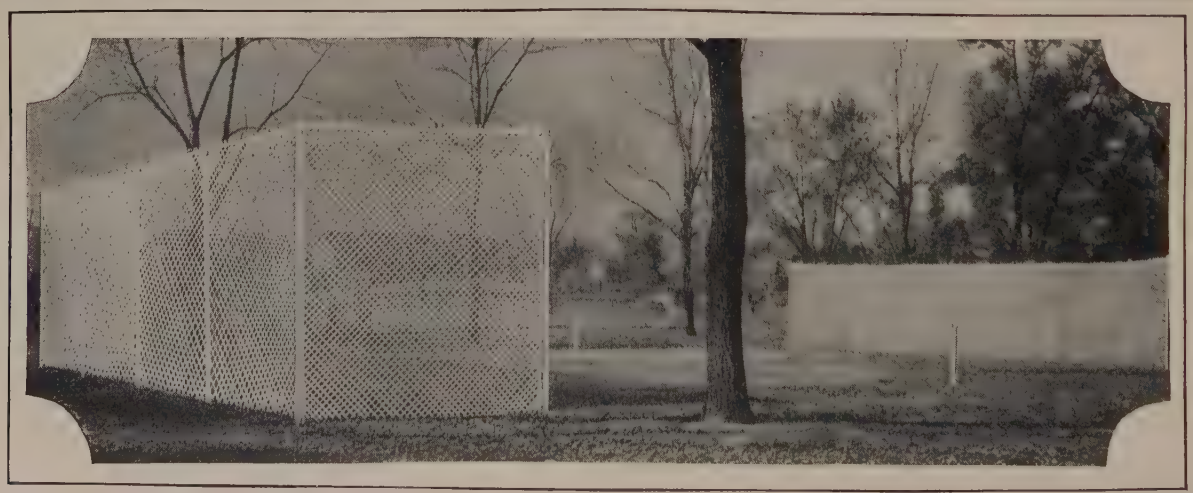
Cleft Chestnut fencing adds unmistakable charm

Ornamental Metal Fencing Lends Itself to Many

Ornamental fencing both beautifies and protects. It is being used to advantage for enclosing the yard and grounds of both large and small homes, in city, suburbs and rural districts.

In a friendly way, fencing bids the trespasser to keep out. It is a gentle, but firm and constant reminder that home owners have property rights that should not be violated.

Children are safer when a sturdy fence surrounds the yard that they play in and they are kept within desired bounds without hampering their youthful energy and love of the outdoors. Stray animals do not run wild through the fence-protected yard. Undesirable characters are less likely to enter the fenced-in home than the unprotected one.



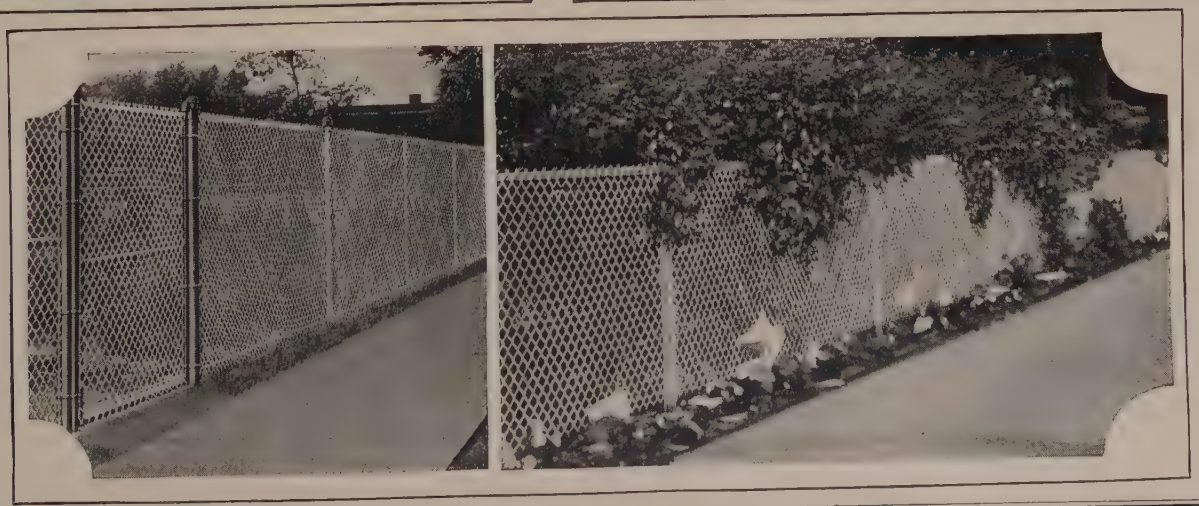
Uses And Improves the Appearance of the Grounds

The fencing of today is available in so many attractive designs and patterns that one is apt to be so interested in it, from the standpoint of artistic merit, that its protective feature is not obtrusive.

Metal fencing can be used alone or it may be combined with brick, stone or in other ways to bring about some desired result, and many unusual and strikingly beautiful effects have been accomplished in this way.

Fencing is now receiving as much thought and attention as any other detail of home building. There is a big difference between simply erecting a fence as a barrier between a yard and the outside world, and utilizing some one of the many designs available to add more beauty to the home.

Illustrations Courtesy of Page Fence Association



For Material needed in
New or Modernized Construction
Use
Manufacturers' Catalogs
Pages 7-320

The whole story of Modernizing is told in this beautiful book, attractively printed in four colors and profusely illustrated. Many actual cases are cited and costs given. A special section is devoted to "Easy Financing." Obtainable through local dealers.

A SECTION devoted to Modernizing the Home. Many worthwhile suggestions and much interesting data.

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IT is hard to believe that the beautiful home shown above was once the old home at the left. Notice the graceful roof lines of the modernized home, the well arranged windows, the inviting entrance. An attractive dormer breaks through the low sweep of roof at left. Old fashioned homes, unattractive homes, take on new life through modernizing.

Uncomfortable and inconvenient small rooms are changed into commodious and beautiful interiors easy to furnish attractively, easy to light, heat and ventilate.

Modernizing is simple to accomplish and easy to finance, and even modest modernizing jobs add to the value of the property.

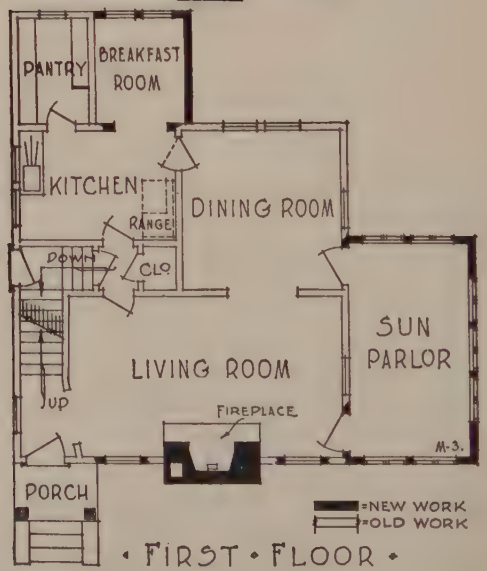
Making New Homes from Old Houses

We are now living in a period of the nation's greatest prosperity. The actual expendable income in the hands of consumers is unbelievably large. Banks and building and loan associations have vast sums of money to loan for building construction at attractive interest rates. The building industry has been brisk for the past few years—yet the country is by no means "overbuilt" with good houses.

The housing facilities of this country can be broadly placed in three groups—

Group One—these are the newest and most modern structures. Houses that are characterized by the latest architectural style. That are attractive inside and out. That have the modern conveniences, the numerous features that bring the utmost in comfort. These are the houses that are accepted as being entirely satisfactory—but there are relatively few of them. They represent only a part of the homes that have been built within the past few years.

Group Two—These are the houses that are so well located, so well conditioned that they will be utilized for ten, twenty, fifty, or more years as residences by substantial income families. They are in good neighborhoods where there are no objectionable features. Their foundations are sound, and structurally they are good, but, they lack the modern, and acceptable attractiveness, the desired convenience and comfort.



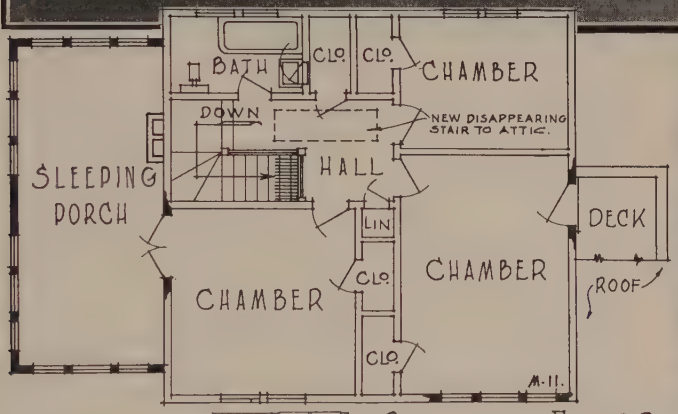
IN looking closely at these two illustrations anyone can readily see that while the general lines of the old roof have been retained, much improvement has been made by the addition of the comfortable sun parlor, and the impressive chimney at the front.

The old entrance with its awkward flight of steps was changed to the inviting entrance and porch shown in the larger picture.

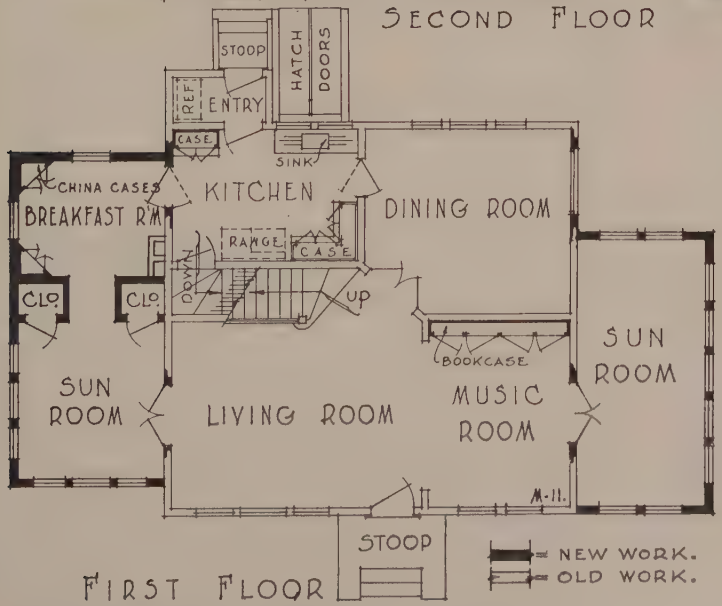
From the composite floor plans it is easy to see the improvements completed inside to make two comfortable and convenient floors out of what was formerly simply a collection of rooms.

The new chimney provided for a cozy fireplace in the living room. The breakfast recess was added and, through the building of the sun parlor, a large dressing closet was made possible on the second floor.

Modernizing can do as much for any home as has been accomplished in this instance. In some cases many changes may be necessary. In others only a few.

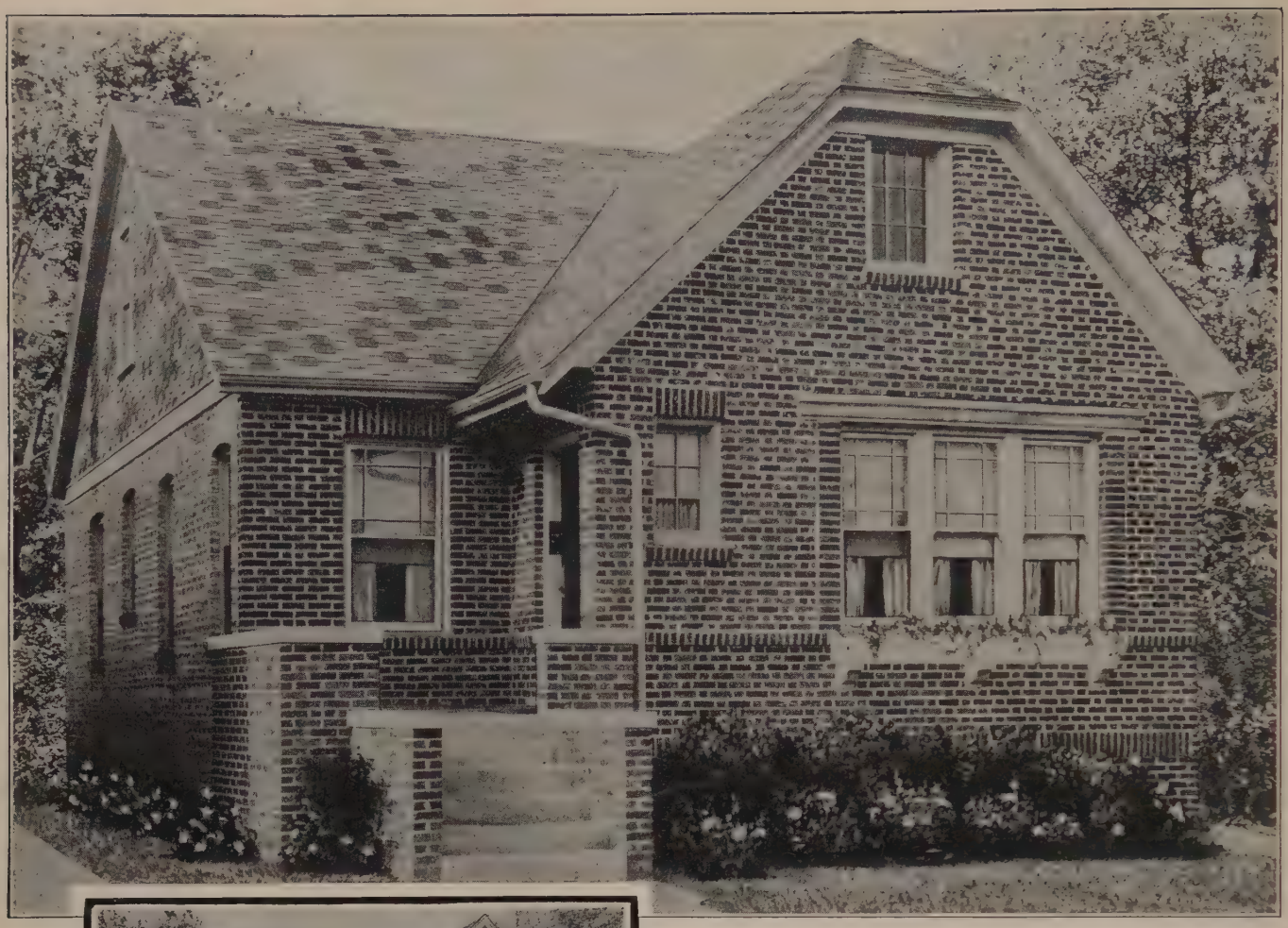


SECOND FLOOR



FIRST FLOOR

THE small house shown above would be hard to sell, on outside appearance, because of its unattractiveness. But note, from the picture above, the wonderful changes that have been effected. The graceful roof lines, the well grouped windows that insure plenty of light and easy ventilation within. See the big sun room added at the right, entered through French doors from the music room. Notice the smaller sun room at the left separated from the living room by French doors and from the new breakfast room by an attractive archway. Bookcases were built into the music room, cabinets into the kitchen and corner china cabinets in the breakfast room. A sleeping porch was added to the second floor and a disappearing stairway installed in the upper hallway to give easy access to the attic.



A VENEER of face brick, placed over the old exterior, and a new roof of colorful shingles, make the startling change in the old house shown above. Notice the rearrangement of steps leading to entrance. The change in roof lines that add so much to appearance.

Inside, rooms were rearranged to bring more convenience and greater comfort. Wide double doors and archways replaced narrow door ways. New lighting fixtures replaced the old style fixtures that had little to recommend them in the way of attractiveness. Soft light now floods the living room at the touch of a button. Floor and table lamps, beautifully shaded, make it easy to read comfortably. The kitchen has a new comfort-high sink, with swinging mixer-faucet, utility cabinet and many built-in features that save steps and make work easier. Hot water is always instantly available and a model bathroom with graceful tub and shower fixture makes bathing an easy, healthful pleasure. These are some of the many things that modernizing does to change an old house into a modern home.

They are not convenient, often not even comfortable. The bathtub has legs, or, sometimes, there is no bathtub. Floors are worn and ugly. The interiors consist of small, poorly arranged, inconvenient rooms, with small connecting doors. There are millions of homes in this group, and they are not satisfactory from a modern housing standpoint. Their number is so large that their occupants represent the majority of our national market for radios, automobiles, and many other commodities and services of the highest character.

Group Three—Consists of the most poorly located, poorly conditioned houses. While millions of families live in these homes under uncomfortable, and sometimes unsanitary conditions, they do not represent desirable housing from a social standpoint. Nothing very much can be done with the houses in this group except to reduce their number as rapidly as possible and move their occupants into better houses for their own good and for the good of the nation at large.

It is in the second group that we find the big field of endeavor in the form of remodeling, or modernizing. It is in these well located, structurally-sound houses that we find the largest single grouping of families, those who normally would acquire new homes within the next few years, providing they can satisfactorily

HERE, by holding to the old lines of roof, and adding an attractive porch and stone chimney, much has been gained in the way of outside appearance. The benches at either side of the entrance give an added touch of quaintness and hospitality.

Inside, a large fireplace was added, with built-in bookcases on either side. Utility cabinets were built into the kitchen to make work easier.

Both floors, as modernized, now present a particularly good arrangement and give much in living comfort.

New lighting fixtures were easily installed. The bathroom was improved through putting tile on the walls and floor. Roof was reshingled in a pleasing green and offers a charming contrast to the buff coloring of the brick veneer.

A central heating unit was placed in the basement to replace the old stoves with all the labor necessary to keep three or four fires running, instead of a single efficient unit.

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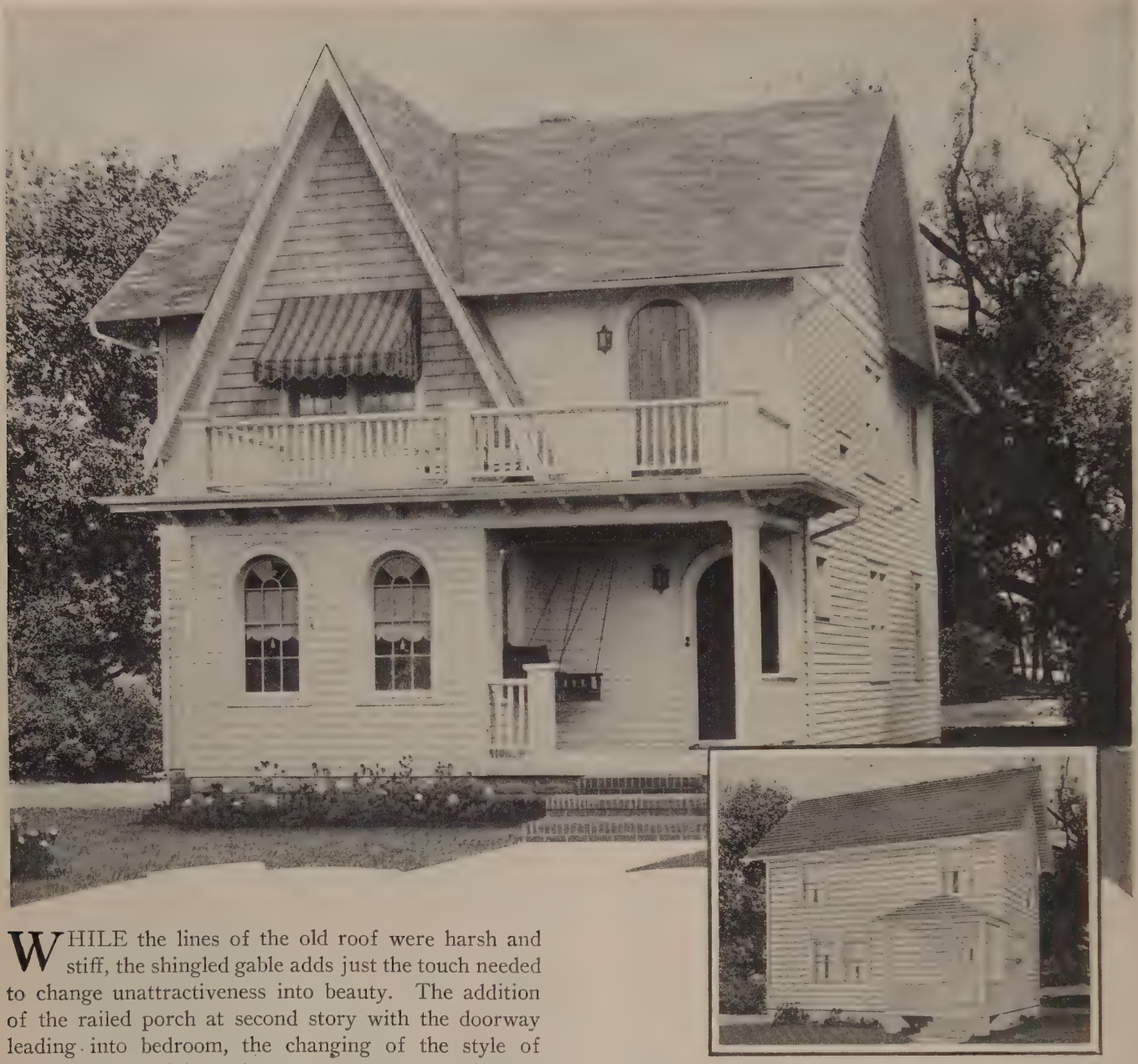
dispose of the old home through trade or sale, but old houses are hard to dispose of, as a rule, except at a sacrifice, and the ownership of a home represents, in some cases, perhaps the savings of a lifetime.

It is the purpose of this article to point out as clearly as possible how any old house, structurally sound, can be made more livable, more comfortable and convenient, and more valuable as a residence to live in, or for trade or sale. How old architectural lines, with obsolete ornamentation, can be remodeled and changed into graceful and beautiful modern lines. How poorly arranged interiors can be made modern, brought up to date. A clutter of small, useless rooms, hard to furnish attractively, hard to heat and ventilate can, through modernizing, be made into a charming arrangement of commodious, attractive rooms, with attractive arches and broad doorways. Rooms that show comfort and convenience at every turn. Rooms that can be artistically lighted by modern electric fixtures, that can be well ventilated by the proper placing or regrouping of windows. Rooms that can be attractively and comfortably furnished and decorated to make real livable rooms.

One thing to keep in mind about modernizing is, that no matter how little is done it is a start in the right direction, and work can be carried on piecemeal, at the



WHILE the lines of the old roof were harsh and stiff, the shingled gable adds just the touch needed to change unattractiveness into beauty. The addition of the railed porch at second story with the doorway leading into bedroom, the changing of the style of windows, and adding a bay, a new entrance and porch with brick steps leading to it have added materially to the exterior appearance of the old home, given it an attractiveness, an appealing charm entirely lacking before. Brought it up-to-date, made it modern, convenient and comfortable and enjoyable to live in. Added materialy to the intrinsic value of the property. Made it easier to dispose of, if desired, at a higher price or place it where a loan can easily be negotiated should money be needed in an emergency.

Money for modernizing plans is easily procured through the same reliable sources that loan just as readily for this remodeling work as for new construction.

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pleasure of the owner, or the whole job can be done at one time. Money with which to finance a modernizing job is just as easy to obtain as the money for new construction because of the added value given to the old home, because of its more ready salability. Because of the fact that the addition of new, modern homes, or old homes modernized, to a neighborhood increases the property value of the entire neighborhood.

Many home owners who have started with the modernizing of one room, and learned the many benefits of modernizing, have gone on and on, tearing down here, adding there, until they now occupy a home that does not suffer by comparison with even the newest homes in their neighborhood. And, the entire investment in remodeling work is more than offset by the additional convenience and comfort they now enjoy midst modern surroundings, and in the greatly increased intrinsic value of their property.

Many homes, formerly lacking proper bathroom facilities, now have beautiful bathrooms, with modern plumbing and fixtures. New and convenient kitchens replace the old kitchens where every duty was tiresome

SHINGLES, in a soft color tone, were placed over the old exterior. An attractive gabled entrance, with neat lantern type light added; and an impressive chimney built of brick.

A sunroom, with well arranged windows, was built on and an attractive dormer at the second story changes and greatly improves the whole appearance of the old house that looked so worn and homely. Devoid of architectural attractiveness and representing little in value and less in living comfort and convenience.

Inside the rooms were rearranged, partitions partially removed to permit the building of archways between sunroom and living room, and living and dining room. The kitchen was brought up-to-date, made easier to use through adding convenient cabinets. Little touches here and there brought added comfort and turned the old house into a modern home, good to look at, and to live in. Made it a real home in every way.

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and laborious work. Convenient breakfast and dining nooks have been built in space that was formerly wasted. Efficiency cabinets have replaced old cupboards. Modern laundries with up-to-date equipment have made the family washday almost a time of pleasure. Central heating units have replaced old stoves and brought inside temperatures up to the comfort point instead of simply taking the chill off a room.

Modern incineration has decreased the fire hazard in numerous homes and made the disposal of kitchen and miscellaneous refuse a simple matter. Old cellars have been turned into cheerful recreation and play rooms. Hot water heaters with their continual supply of hot water have displaced the steaming kettle on the stove. Dingy attics have blossomed forth with additional, attractive bedrooms and bathrooms—become just as much a livable part of the home as the downstairs floors.

Modernizing has brought untold comfort, immeasurable convenience to thousands upon thousands of homes. Large and small, in cities and rural districts, in towns and hamlets. To the modest home and to the stately mansion alike. Made them better places to live in.

IN the "new" home shown (large picture) one can still trace a semblance of the old roof lines, but remodeled with a low sweeping curve over the entrance porch, and even such a simple change as this adds much to attractiveness.

The stucco walls, with a half timbered treatment, and in a rich creamy buff color contrasts pleasingly and blends harmoniously with the rich color tone of the shingled roof.

More windows were added and a chimney built of brick to permit the installing of a fireplace in the living room. A new porch and entrance were arranged. The front lawn terraced and artistic flower boxes placed at the front windows downstairs.

Windows were placed to light and ventilate the attic which can later be arranged to accommodate additional rooms.

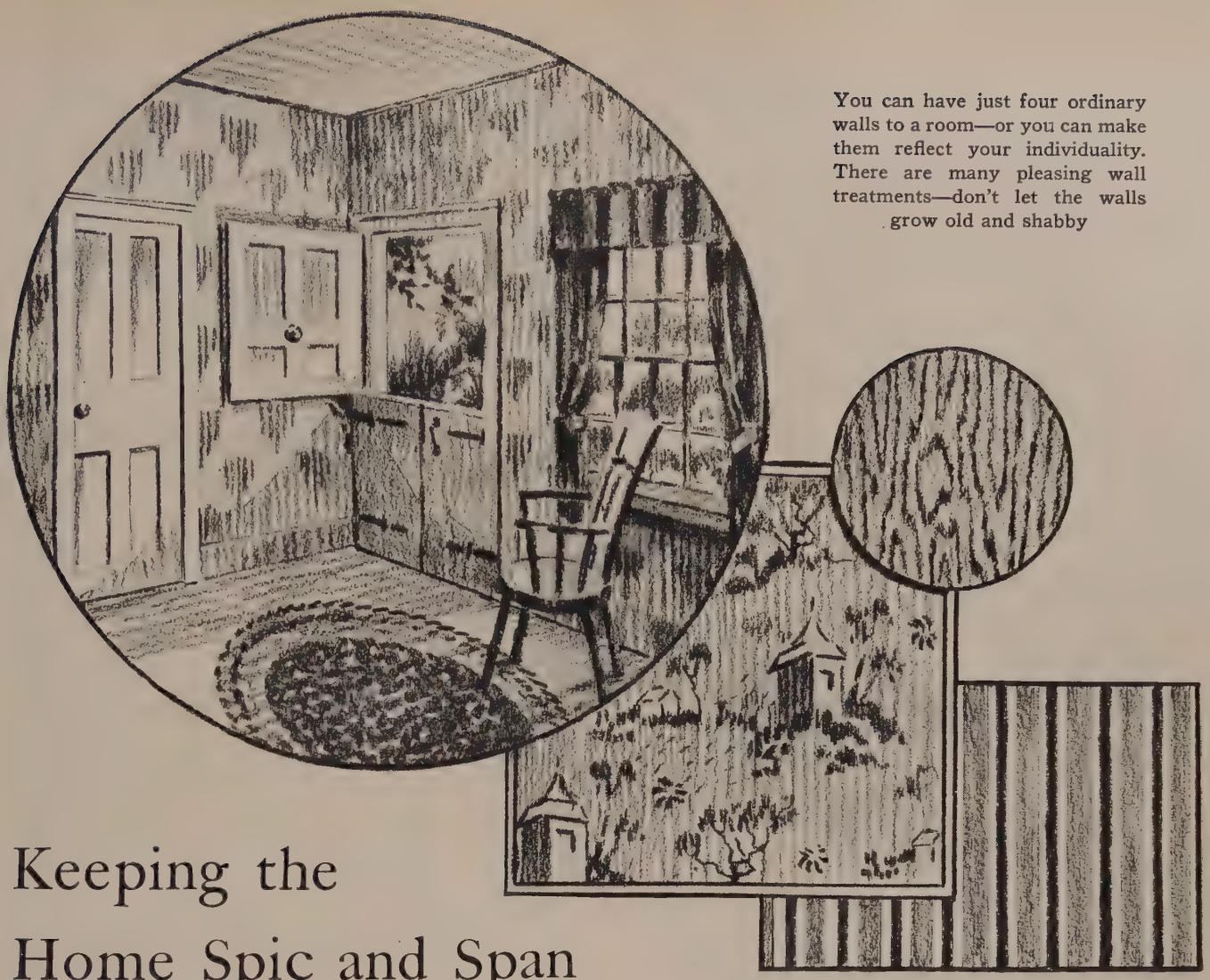
In the kitchen utility cabinets, broom closets and other features were built in. New plumbing was installed and the walls of the bathroom tiled and a medicine cabinet set in the wall.

Electric fixtures, properly placed, bring light at the touch of a button and wall outlets permit the convenient use of the many modern electric appliances.

Modernizing is almost magical in its wonderful effects—in its changing from the drab and ugly to the cheerful and beautiful. It knows practically no limitations. It is all so logical, so well founded, so practical, so easy of accomplishment.

Home owners who, before modernizing their houses, found them hard to dispose of except at a loss have been able to sell at prices far in excess of the true value of the property in its old condition, plus the cost of modernizing. Many owners who tired of the inconvenience and discomfort of the old house, found their modernized home so comfortable and attractive that they are living a new and most agreeable life in the same house but in entirely different and unusually pleasant surroundings.

The modernizing of old houses is growing. More and more every day, old houses are being changed into modern homes, with every convenience, every comfort imaginable. Owners and builders, too, are showing a growing interest in this plan which is substituting the new for the old, that is building up neighborhoods and communities that have run down. That is increasing property values and making possible the sale of houses (modernized) at a good profit where, formerly the same house (in its old dress) could only be disposed of, if at all, at a loss, the price representing lot value only.



You can have just four ordinary walls to a room—or you can make them reflect your individuality. There are many pleasing wall treatments—don't let the walls grow old and shabby

Keeping the Home Spic and Span

The old house (modernized) is easily kept in good condition and its appearance improved, just as in the case of newer houses, by painting or refinishing the interior, renewing the wall coverings and keeping the exterior in a good state of repair and appearance from time to time.

A good paint job on the outside of a frame house every couple of years preserves the wood and adds much to appearances.

Floors should be waxed and polished and old floors, still in good condition, refinished.

There are many reliable products available in the way of paints and varnishes, floor wax and polishes for various purposes. And, many appliances for applying them properly and easily.

Concrete floors can be kept clean and in good condition and attractive through the use of some of the many enamels and paints made for this purpose.

Basement walls can be treated with waterproofing compounds that assure water-tight foundations, floors, walls, etc. These are easily and quickly applied.

Kitchen and laundry floor coverings such as linoleum, etc., are often improved by varnishes and other products made for this purpose.

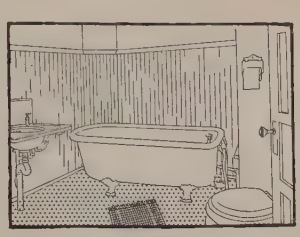
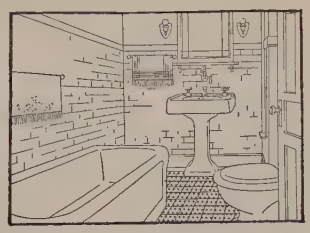
There are many appliances available that will aid greatly in keeping the home in good condition inside and out, without any great amount of work or effort.

While many a home owner is handy with a hammer or brush, the average man finds it better in every way to place everything but the very simplest of jobs in the hands of a trained artisan who has made a study of the work to be done.

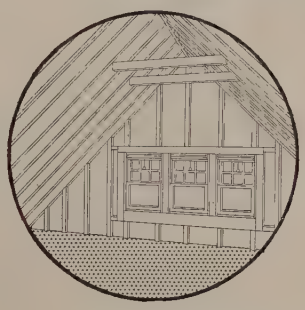
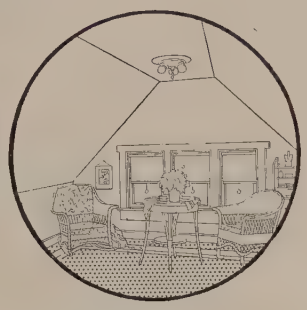
Keeping the modernized home in good shape is neither a hard nor expensive proposition after it has been thoroughly renewed and made young again. And, as is the case with every home, it pays to immediately take care of minor repairs before they grow big, and more expensive to handle.

The average person takes pride in his home. He wants it to wear well and give continued comfort and convenience. And, it will, if you will meet the situation half way and not let the small things that need attention grow into the bigger things that demand attention.

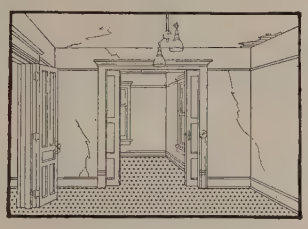
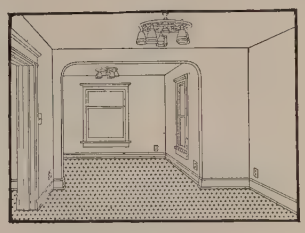
Some Suggestions for

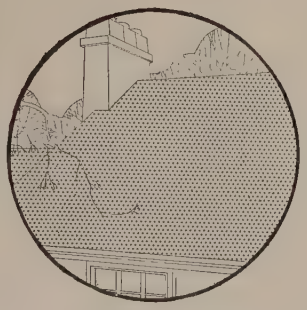
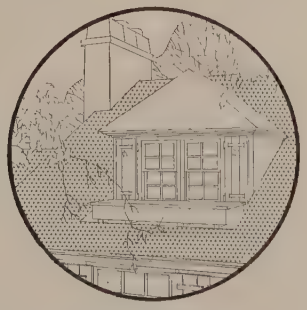
The old style bathroom is inconvenient, unsanitary and ugly. It is unmodern! But no longer will you need to be ashamed of it. New fixtures and tiled walls will bring it entirely up-to-date in appearance and convenience. See how attractive this typical bathroom in an old home has been made by modernizing.

You can provide an extra finished room and insulate the roof of your house by finishing off the attic. Bare, dusty rafters become clean attractive walls, and space useful only for storage makes an extra bedroom, sewing room or playroom. The insulation will make the house more comfortable all year round and save much fuel.

Modern interiors are vastly different from those of a decade or two ago. Floors, trim, doors, arches, fixtures, wall coverings—all have modern treatments. New electrical fixtures will work wonders in the appearance of a room. And new wiring should provide ample wall outlets for the many electrical appliances now used in the modern home.

New dormers can add another story in homes that have available attic space. They add a fresh note to the roof line and provide more space and light for the new upstairs rooms.

One thing to keep in mind concerning Home Modernizing is, that no matter how little is done in the way of improvement, more convenience and comfort are assured, and the intrinsic value of the property is increased. Home Modernizing on either a large or small scale is an investment that pays big dividends in living comfort and property value, and pride of ownership.

On these and the following two pages many simple and effective improvements are illustrated and described. All of them are easy to accomplish and none of them represent a particularly large investment.

Study the illustrations and the text that accompanies them closely. Note the striking changes so easily made. Some of these at least can be applied to your home, perhaps with some variation, to make it more modern, more convenient and comfortable to live in, and easier to dispose of, at a better price, should you wish to sell.

Few homes, excepting the ultra-modern, have a sufficient number of bathrooms to accommodate the visiting guests and often the immediate family is put to great inconvenience because of the lack of bathroom facilities.

It is hard to find a home that cannot accommodate, in some convenient space, an additional bathroom. And, it is harder still to find a home that does not need more than a single bathroom.

In many homes an unused closet or storage closet, the end of a hallway, or some other practically useless space will accommodate a modern bathroom, with glistening tile and refreshing shower, toilet, lavatory and the usual bathroom fixtures. Even a small closet will often offer space for a lavatory and toilet.

Varying conditions in individual homes, of course, always govern the modernizing that can be done, but nothing in the way of modernizing is impossible, or even difficult of accomplishment.

The average attic offers wonderful opportunities for modernizing. Up under the eaves, where spiders spin their webs among unused furniture, trunks and miscellaneous articles, a cozy sewing or bedroom can easily be built with finished walls and ceiling. The attic can be thoroughly insulated to keep the heat in during the cold weather and out during the hot months. Here, too, is a splendid place for an additional bathroom, a workshop or playroom for the children.

Old interiors can be easily modernized to present an up-to-date appearance and bring immeasurable comfort and convenience. New hardwood floors are easily laid over the old. Modern archways or French doors can often be used to advantage to replace single doors between adjoining rooms.

New wiring will provide for ample outlets in baseboard or wall to permit the convenient use of the many

electrical appliances and labor-saving devices so essential to the home life of today. New and modern lighting fixtures will improve to a remarkable degree the appearance of a room besides increasing the comfort and health of those living there.

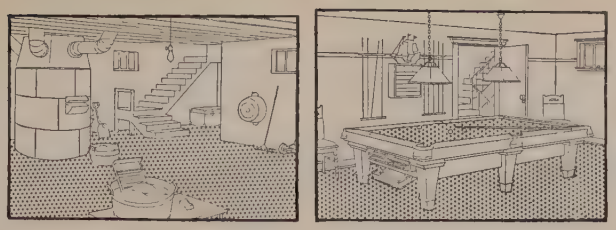
Dormers not only improve the outside appearance of a home but they also increase the space within. They will revolutionize the old attic. Make it light and easy to ventilate. Help to make it as cozy and livable as any other part of the house.

Under the magic spell of modernizing the old basement takes on new life. The bare, dusty and often dismal place becomes bright and cheery. New windows can be arranged for to admit more sunlight and air. A new heating plant will furnish clean, economical heat without fluctuations in temperature. Here can be installed modern laundry equipment and this, as well as the heating plant, can be easily and economically closed off from the rest of the basement, if desired, and a playroom, billiard room or beautiful recreation room, artistically lighted and decorated, and with its individual cheery fireplace, can be easily built here.

The breakfast or dining nook is one of the most appreciated details of modern home life. It can easily be placed in, or adjacent to the kitchen, in some handy spot. It occupies but little space but affords much in convenience and comfort. Many types of kitchen cabinets have breakfast nooks—tables and benches—built into them which are quickly folded away out of sight when not in use. This type of nook also affords a convenient work table and seat. Even the old pantry can easily be arranged to accommodate a breakfast nook.

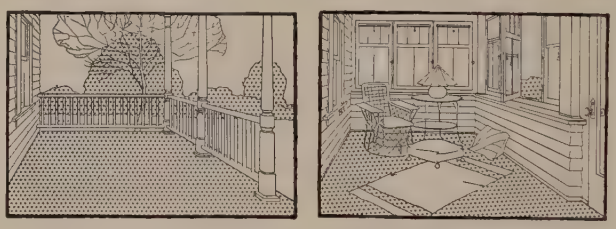
In the colder climates an open porch does not offer the year-round comfort and convenience of the cozy sun room. By enclosing the porch with removable sash, in which glass can be used in winter and screens in summer, you have a room usable at all times and heating facilities are not hard to arrange. A disappearing bed or divan bed would make it available as a comfortable and healthful sleeping room.

The floor plans of old houses are frequently broken up into a series of small, unattractive rooms that are hard to heat, furnish and ventilate. Modernizing plans often tear out partition walls to provide a commodious living room separated from hallway and dining room by artistic archways or French doors. The new living room offers unlimited opportunities for an attractive or unusual arrangement or regrouping of windows, the installing of bracket or hanging lighting fixtures. Through modernizing, a poorly planned floor can be changed into a beautiful arrangement of convenient, comfortable rooms, easy to heat and ventilate, easy to light and furnish attractively.—(*Continued on next page.*)



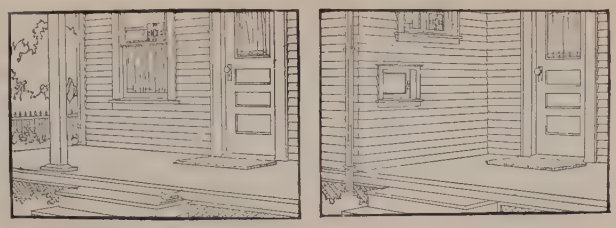
Custom has made the usual basement a bare, dusty place with little use but for storage and the necessary heating plant. At small cost it could be made useful for many things for all the family. Most basements have ample room that easily could be finished off into an attractive billiard room, laundry, workshop, den or playroom.

A breakfast nook off the kitchen is a modern tendency entirely lacking in older homes. Modernizing plans can sometimes utilize an unnecessary pantry for an attractive breakfast nook. Where there is no available space, a small addition could be built onto practically any kitchen to accommodate a cozy and convenient breakfast nook at nominal cost.



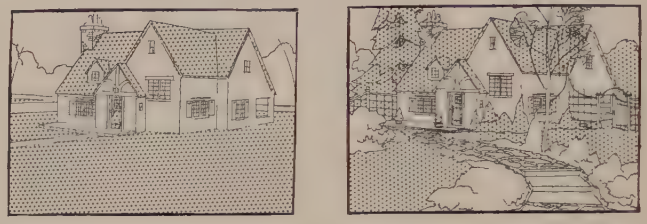
An open porch lacks all-year comfort and convenience of the sunparlor. By enclosing it with removable sash, screen can be used in summer while glass will substitute in winter. The sunparlor not only affords a delightful lounging place but adds greatly to the appearance and value of the house. A day bed would make it a comfortable sleeping porch.

Old houses are frequently broken up into numerous small rooms. Modernizing plans can often include the tearing out of partitions to provide a spacious living room. The larger living room gives an opportunity for a new layout of windows, doors, and fixtures, not to mention the furnishings, etc.



An iceman tracking up a clean kitchen while filling the refrigerator is exasperating to any housewife. Furthermore, it is sometimes inconvenient to be on hand to admit him. A new pantry built on the porch will allow outside icing with no tracks on clean floors nor any necessity to be on hand when the iceman calls.

An attractive home without attractive surroundings is like a jewel without a setting. And no matter how attractive the house may be it will never look its best on a barren lot. See what a remarkable difference proper landscaping makes. Shrubbery, trees, a flagstone walk and some interesting fencing have helped make an attractive home.



It is easy to arrange for outside icing of the icebox, or mechanical refrigeration, which has been developed to a remarkable degree of efficiency and economy, can be utilized.

Cheery fireplaces, either natural, electrical, or gas-fired are easily installed in the living rooms and other rooms. Many of the modern bathrooms are provided with built into the wall electric heaters which afford quick additional heat.

Do not overlook in the modernizing plan, the many things that can be accomplished through landscaping which, often in its simplest treatments, brings additional beauty to the home and garden, making the home a jewel in an attractive setting.

The kitchen probably benefits more through modernizing than any other room in the house. Here are endless opportunities for improvement.

An up-to-date range, with its heat regulator, places modern cooking on the plane of an exact science by removing all guesswork as to the proper temperature required for the cooking of various foods. Modern plumbing has brought unusual comfort and convenience to the kitchen because of the beautifully designed, comfort-high sinks, modern mixer faucets and a never failing instantaneous hot water supply.

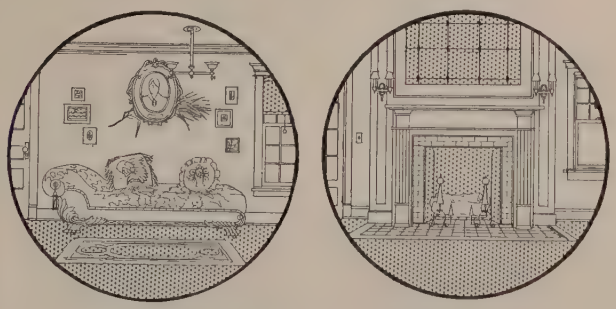
Kitchen cabinets are available in numerous designs, patterns and arrangements, both built-in and portable and these, together with the many other built-in kitchen features, afford the housewife not only the utmost in convenience but save many steps and much work. Through the use of a ventilator fan, installed in kitchen window or wall, all smoke and cooking odors are entirely removed and prevented from reaching other portions of the home.

Modern incineration provides a convenient, easy and sanitary method of disposing of kitchen refuse and miscellaneous rubbish. It reduces fire hazard and greatly improves health conditions.

Every home needs more than a single bathroom. In many homes there are closets used for storage, or other space, that would ac-

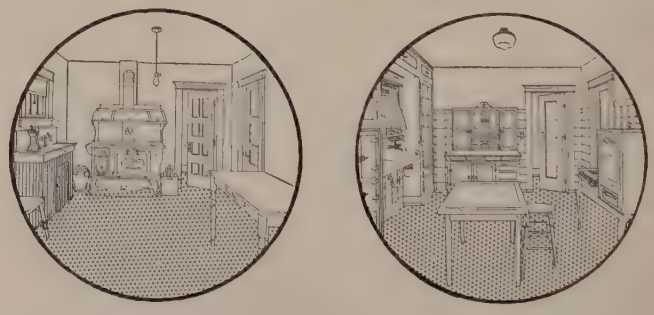
A central heating plant should be arranged for to replace individual stoves. These may be had in so many types and sizes that no home need be without efficient, clean and economical trouble-free heat.

With so many artistic and economical types of fencing available no one can afford to spoil the appearance

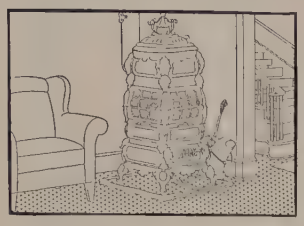


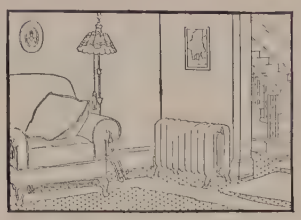
A living room without a fireplace lacks a sense of cheerfulness and comfort. Yet most old homes have available wall spaces that could be used for fireplace construction. A fireplace is frequently the difference between a pleasant room and a cheerless one. It goes back to the old days of the family hearth and the pleasant times spent there.

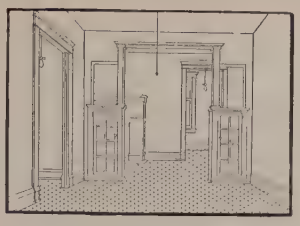
Kitchens like the one at the left are as inefficient as a horse and buggy would be to the modern business man. An up-to-date range, kitchen cabinet, refrigerator, sink, work table, cupboard space and correct lighting help to lighten work in the kitchen shown at right.

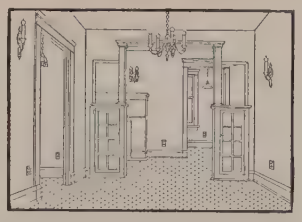


While the old "base-burner" has its pleasant memories and associations it is far from a practical heating unit. Dust and soot, wasted space, ugly appearance—all can be charged against this obsolete and unsatisfactory method of heating. A central heating plant is essential in the modern home. Don't go through another winter stoking stoves.





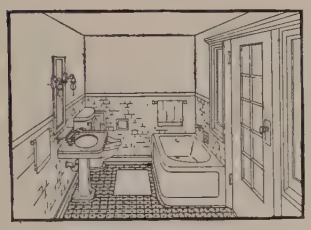




No amount of interior remodeling will be complete without new and up-to-date lighting fixtures. Candelabra are so susceptible to the style note, that out-of-date fixtures are at once noticeable. Modernizing by all means should provide attractive fixtures and new wiring should give ample wall outlets for attaching electrical appliances.

of his home by allowing a run-down, disreputable fence to enclose the yard. Much charm can be added to the home through the use of a proper style of fence of one of the many appropriate designs and materials. And, in addition, fencing insures privacy and protection.

Present day lighting fixtures and arrangement lend themselves to every desire and mood. They can bring warmth and cheer, or coolness and repose. They can brilliantly light a billiard room or softly light a comfortable lounging room. Modern lighting is unusually flexible and, through the use of fixtures and portables, any desired lighting effect or combination of effects is possible.



commodate an extra bathroom, a shower perhaps, or at least an additional toilet and lavatory.

Often the entrance to a house bespeaks the character of those who live within. Doorways can say "hospitality" and other things as plainly as words. Simple changes to many doorways would make them much more attractive and inviting. They are made in so many attractive designs that they can and should harmonize perfectly with the house of which they are such an important part.

Many old homes have much space that could be easily put to better use. Old closets where unused clothing and odds and ends are hidden away, can be turned into comfortable rooms, modern closets, or much needed bathrooms.

Modernizing has already done much, and will do more, to turn these useless spaces into appreciated, usable spots that will add much to the convenience, comfort, beauty and value of the home.

A modernizing plan may mean a few simple improvements or quite an extensive operation. In neither case is there anything to complicate or discourage.

While the modernizing of each home presents its own problem every improvement is well within the range of modern construction methods, and equipment or material is easily available for the desired purpose.

Home modernizing means the bringing up to date of millions of old houses, still structurally sound, many of them built at a time when many of the present day conveniences and improvements were unknown.

It means adding comfort and attractiveness where it is now sadly lacking.

It means raising the standard of living, making happier homes, beautifying cities and increasing values.

A disreputable fence will go far toward spoiling the appearance of an otherwise attractive yard. Perhaps a coat of paint would smarten it up—an entirely new fence would not be costly. Yards that heretofore have not been fenced can often be made to look charming by a neat and well-constructed fence of iron, wood, brick or other material.

Hospitality is most largely written on a house by its entrance. Simple changes to most doorways would make them incomparably more attractive and inviting. Here, as shown at the right, the lawn has been terraced up to the floor level, and a rich yet inexpensive portico and doorway remakes the appearance of the house front. Is yours as attractive as this?

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Attractive Entrances

The front entrance and exterior door should be carefully chosen, for no other single detail of a home is more important than its entrance.

Address Home Builders Catalog, 75 E. Wacker Drive, Chicago for information or detailed drawings of entrances.

A front entrance can say many things as plainly as if it spoke in words. And, most of us want the front entrances to our homes to express hospitality, cordiality, dignity and pride, because the entrance is the first and last thing the visitor sees when entering or leaving a home.

Certain types of entrances go with certain styles of homes and nothing could be more incongruous than an entrance that does not harmonize with the home of which it should form so important a part.

The entrance of many a fine old home may need nothing more than refinishing to bring back its original beauty. In other homes the entrance should be replaced to bring to the home the harmonious lines, the quiet dignity, the cordial hospitality that the present entrance may lack.

While the cost of an entrance may be a trivial matter in dollars and cents, it is an all important detail which makes or mars a home's attractiveness.

The floors in an old house lend themselves to many treatments that will make them attractive and a valuable part of the home.

The appropriate flooring is available for every room from basement to attic regardless of the size of room or its character.

Delightful living rooms, cozy sun rooms, restful bedrooms, colorful bathrooms, efficient kitchens—every one can be easily and appropriately cared for with the correct flooring material.

Left: See how the polished floors enrich the appearance of this wonderful living room with its beautiful furnishings and decorative treatment.

Below: Here is a cozy arrangement—a combination living room and dining room. In an arrangement of this kind the floor is a very important detail.

Lower Left: The proper flooring is just as important in hallways as it is in rooms. Flooring of character tones up the whole home and adds to its comfort and attractiveness.

Floors are Important Details in the Home

The simplicity with which new floors can be laid over the old flooring has proved a boon to the home modernizer and accomplished much in raising the standard of the old home towards the higher plane of the modern home.

Many manufacturers make and furnish their local dealers with special thicknesses of flooring especially designed and adapted for modernizing work that is easily and quickly laid without disturbing the old floor. Aside from the economy and saving in labor there is often an advantage in having this double floor.

Flooring may be had in many attractive shades and finishes. In a living room or dining room "weathered" finish gives a rich and beautiful effect. Novelty shades such as "forest green" or gray often give the desired touch to sun parlors and breakfast rooms.

Some authorities on interior treatments for the home express the opinion that floors in living rooms, dining rooms, libraries, etc., should be dark. They explain their stand by the further statement that the floor should be the darkest part of an interior, the wall treatment in lighter value and the ceiling the lightest tone of all.

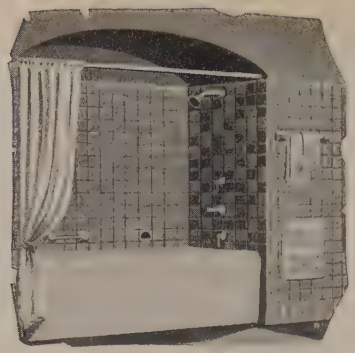
No matter what the flooring requirements of a home may be, or how varied the personal preferences, there is a suitable flooring to fully meet every need.

Reflooring work can be done with little muss and fuss. One room may be done at a time to avoid disturbing the household if this is more desirable than making one job of the entire home.

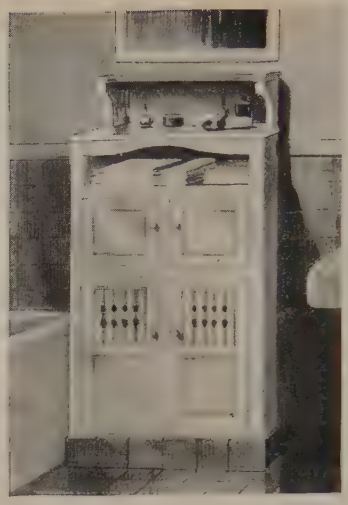
New floors will add much to interior beauty and comfort. And, in addition, and important, is the fact that modern floors are easy to keep dust-free and clean.

New floors of wood, rubber-tile, tile, linoleum, etc. can be had in such wide variety that no home need lack the internal beauty and increased value that new flooring will bring.

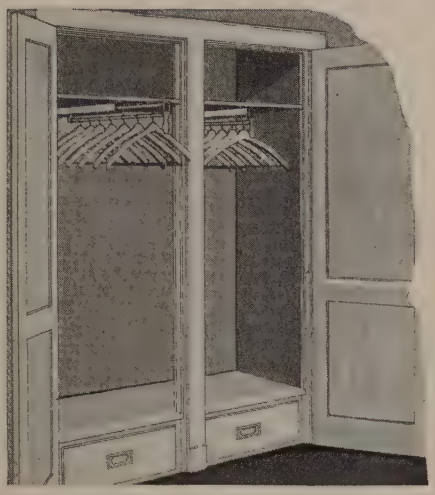
An incinerator provides for the easy and sanitary disposal of kitchen refuse and miscellaneous rubbish.



A shower fixture, and wall heater improve any bathroom.



This convenient bathroom dresser cabinet provides convenient storage for many bathroom necessities.



Space-saving closets, single or double, provide more clothes hanging room in smaller space.

Every bathroom needs a mirrored medicine cabinet.

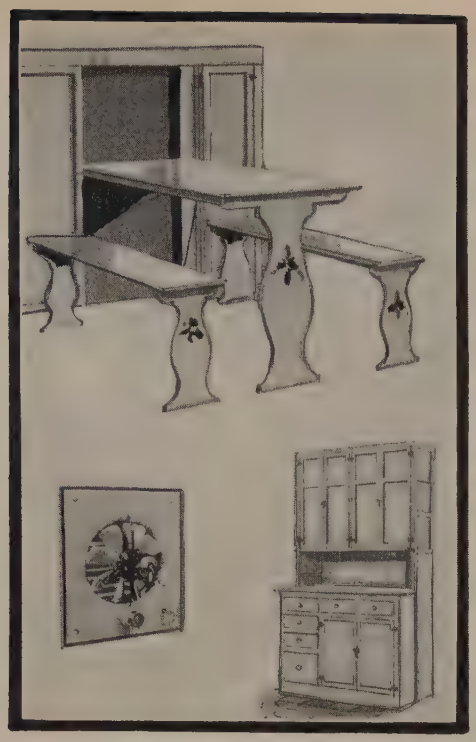
The built-in mail box is an added convenience to the modern home, and protects mail from tampering.

Disappearing beds make any room a comfortable sleeping room at night.

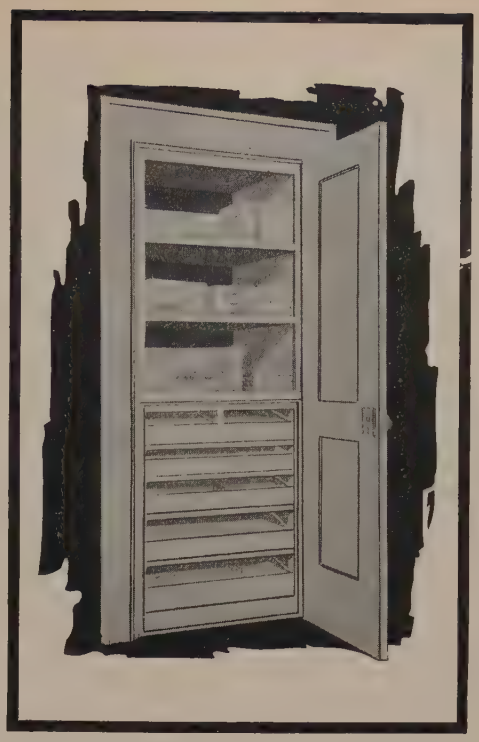
Disappearing stairways give easy access to the attic and are concealed when not in use.

A built-in dining nook can be conveniently placed practically anywhere.

Some Features Easily Installed in Your Home



A folding dining set, kitchen ventilator fan, and modern kitchen cabinet make the kitchen more convenient.

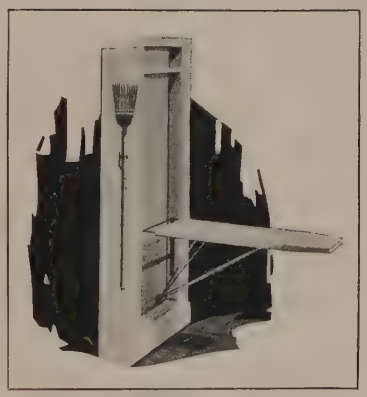


The built-in linen cabinet provides convenient storage for household linens, without wasting space.

Built-in Units Make More Convenient Homes

Practically all of the many built-in features lend themselves particularly well to modernizing, because of their unusual flexibility and the great variety in design and size.

Kitchens that lack those things that mean so much in convenience and comfort are easily brought up to date. Cabinets that provide ample storage space and that are handily arranged inside are made in many forms and sizes.



Built-in ironing boards are always available and never in the way when not in use.

Telephone cabinets, set in the wall, are available in many attractive designs and styles.

There are built-in ironing boards, broom closets and storage units of every character, to save room and steps, and make work easier. Even the delivery of packages are facilitated by the built-in package receiver in the back door.

Telephones repose within easy reach in ornamental cabinets made both with and without doors.

Mail-boxes are made in the built-in type so that the postman deposits mail from the outside, which is easily available to the occupants from the inside and safe from tampering with from the outside.

Modern bathrooms can be equipped with convenient chairs that are never in the way because they fold into the wall when not in use. The value of the useful medicine cabinet in the bathroom is too well known to need anything in the way of comment, but there are handy dressing tables and towel cabinets that completely fill a long felt need in the bathroom.

The beauty of the dining room is enhanced through the addition of attractive corner cabinets for the convenient storage of china, glassware, linens, etc.

Living rooms have their built-in bookcases and shelved book niches. Hanging book shelves and china or bric-a-brac cases find their sphere of usefulness in various rooms.

Built-in window and other seats are a welcome addition to modern home life and afford comfort and beauty spots innumerable.

Much can be said in favor of the many built-in conveniences available for the home owner who wishes to make his old home, with its pleasant memories and associations, more modern, more comfortable. Who wishes to increase its value. And, through the employment of some of the many recognized built-in convenience features, this desire is easily and economically accomplished.

If you are building a new home be sure and include these features.

Making the Waste Spaces Livable Parts of the Home

Probably no parts of the old house, and sometimes in newly built homes, offer greater possibilities for modernizing than the attic and basement.

Most homes have attics that are nothing more than storage space for trunks, unused furniture and odds and ends for which there is no present use and doubtless there will be no future use, but there's the attic—put it up there.

But why waste such valuable space, particularly when so often an additional bedroom or bathroom, a playroom or study, a sewing room, where materials need not be hurriedly gathered together when someone calls, is so sorely needed?

The average attic is usually unbearably hot in summer and almost as cold as the outdoors in winter. But it is so inexpensive and so easy to have new, livable, cozy, comfortable rooms here.

Insulating material will prevent the escape of heat through the roof in winter and penetration of sun heat in summer. Whether you contemplate making your attic a livable part of the house or not, you should certainly insulate it because this will make the whole house warmer in winter and cooler in summer. And, your saving in fuel will pay for the material and work almost before you know it.

Should you desire to make the attic worth while, remember you can have finished rooms here as comfortable as in any part of the house. The walls, ceilings and floors can be tastefully finished and decorated. Modern lighting fixtures can be put in place. An additional bathroom can easily be installed.

New windows or dormers can be added to increase inside space, give more light and better ventilation, and improve the outside appearance.

A disappearing stairway is easily installed that offers easy and safe access to the attic and is out of the way when not in use. And even disappearing stairways have been further improved—motorized. They come down or go up into storage position at the touch of a button.

And, here, where formerly all was waste, and dust, and cheerlessness, can be easily and economically arranged new, beautiful, cheerful rooms that anyone would be glad to use.

The basement, too, as readily as the attic lends itself to modernizing. From a dark, dismal, dusty place it blossoms forth into a bright, cheery, livable part of the home—another floor of comfort and convenience.

Think of the pleasure to be derived from a wonderful recreation room with a cheering fireplace, artistic lights, and colorful walls, ceiling and floor. What a place for entertaining—bridge parties and dancing. How closely the children would stick to home with such a room in which to entertain their friends.

What endless enjoyment would be derived from a billiard table here, or perhaps a complete workshop for the man or boy who likes to tinker.

Imagine the model laundry with its work-saving, satisfying equipment. The indoor clothes dryer. The trouble-free, efficient, economical heating plant to furnish steady heat, day and night, always temperature-controlled by you with no more effort than to move your finger.

Modernizing makes possible all of these and many more things. There is no end to its benefits—to the convenience and comfort it brings. And, every dollar invested in modernizing adds to property value and returns far more than its cost.

A comfort-high sink with double drainboard, mixer faucet and sprinkler hose

Modernizing the Kitchen

The average kitchen in an old house lends itself readily to a modernizing plan because wonderful strides have been made in the past few years in the development of fixtures and labor and time saving devices for the kitchen.

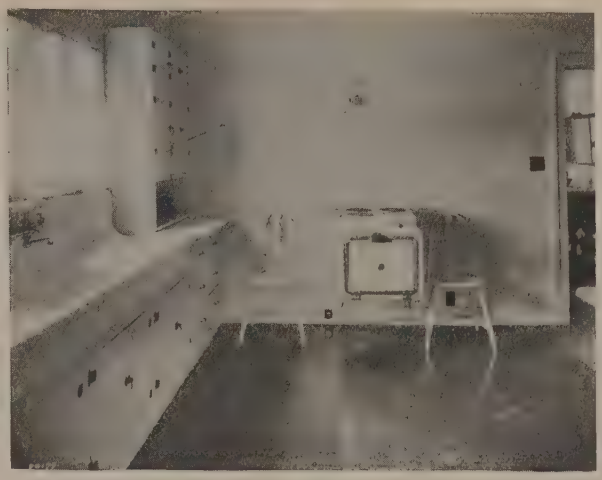
A modern, efficiency kitchen can be divided into five essential parts. The range, sink, refrigerator, work table and storage space.

Storage facilities and work tables have been cleverly combined in many convenient and attractive forms of kitchen cabinets, both of built-in and mova

Some of these are wired for the more c of the many electrical appliances that the m wife uses so generally in her daily preparat

A kitchen cabinet is a necessity in the mo as it permits the easy and accessible storag numerable things that are used in the kitch

Modern cooking ranges have been deve very high state of efficiency and the moder wards color everywhere has found its wa



Conveniently arranged cabinets and well grouped windows make comfortable and cheerful kitchens

Modern ranges, built-in breakfast nooks and well-placed outlets for electric appliances make work easier

kitchen and is exemplified not only in the range itself but in the walls, the floor, and in the various modern kitchen fixtures that have turned the room of tasks into a place of pleasurable occupation.

Up-to-date ranges can be had in numerous designs and sizes—large and small, in both electric or gas operation—and both types are unusually efficient. Equipped with oven temperature regulators they have brought the fine art of cooking to so exact a science that even the novice can proceed and be fairly sure of perfect results.

Kitchen sinks have changed greatly both in design and construction. In modern homes, one no longer sees the old enclosed sink, too low for comfort and impossible to keep bright and shining, and often even unsanitary. Cracks and corners were lurking places for grease and germs, an ideal spot for the breeding of insects.

Modern sinks are installed at just the right height to permit them to be used with comfort. The sink of today is a think of beauty, free from cracks and crevices, every part easy to get at and to keep scrupulously clean with practically no effort.

Wide single or double drain boards provide ample working space and slant just enough towards the sink so that water runs off and into the sink of its own accord.

Many up-to-date sinks have swinging mixer faucets that provide water, hot or cold, or mixed to the exactly required temperature and delivered at just the desired spot. An automatic water heater in the basement provides instantaneous hot water at any time, day or night, not only to the kitchen but to the laundry and bathroom as well.

There is also a type of faucet which has a hose for rinsing dishes, sprinkling clothes, and other uses that neither splashes nor sputters and that makes work easier and more convenient.

Modern refrigeration has brought untold comfort to the kitchen and, more important still, safeguards the family health through the safe preservation of foods. There is an endless variety of refrigerators available both for natural icing and for mechanical operation.

Refrigerators, too, have taken on the color tones so popular in the home today and are available in various attractive designs and finishes, and in sizes to perfectly fit every requirement.

Ventilator fans are easily installed in kitchen window or wall and they keep the entire house free from cooking odors and grease-laden steam.

Even on the hottest days of summer a ventilator fan will bring refreshing breezes into the kitchen, make it more comfortable and cooler.

There is nothing difficult in bringing an old kitchen up-to-date. In making it a cheerful, pleasant room. Walls can be tiled or treated in numerous other attractive ways. Old worn floors can be replaced and tastefully covered.

Breakfast nooks can be built into the kitchen itself or located nearby. Some types of breakfast sets fold away into wall cabinets and some types of kitchen cabinets have folding breakfast sets built in them as a part of the cabinet. Sets of this kind occupy no floor space when not in use and offer a convenient place to sit while working at the table at some culinary duty.

Built-in broom and ironing board cabinets also bring added convenience to the kitchen and keep this necessary equipment out of sight when not in use but instantly available when required.

While every kitchen in an old home may present its individual modernizing problems, there is nothing in the way of improvement that is impossible, or even hard of accomplishment.

Modern equipment and convenience features for the kitchen are so numerous in character, so varied in design and arrangement, so logically constructed that any kitchen, no matter how large or small, or how poorly designed, need go without those things that make work easier and steps fewer.

Greater comfort, unusual convenience and remarkable attractiveness can be brought to any kitchen through modernizing—even when done in a modest way.

Breakfast Nooks and Dinettes

The modern breakfast nook or dinette, from its inception, has won a firm place in the family circle. There is a certain informality at meal time when the family, and sometimes a very intimate friend or so, gather about this friendly little table for a cheery, dainty meal.

Very often the nook is placed in an alcove directly off the kitchen. Sometimes in a jog in the hall between kitchen and dining room. Often a part or all of the old pantry will provide a splendid place for a breakfast or dining set or nook. Or it can be placed in a corner of the kitchen itself, or it may form a part of one of the modern kitchen cabinets, both table and seats folding away compactly into its own cabinet.

Or the folding nook may have its own cabinet that can be set into the kitchen wall or in any other convenient wall. Built-in sets of this type are out of sight when not in use and provide a convenient kitchen work table and a place to sit at many kitchen duties.

During the cold, raw mornings of winter, it is often far more comfortable and convenient to eat breakfast in the kitchen. And, on hot summer days, the kitchen dining set is closer to the refrigerator with its cold foods and drinks.

In the household where there are children the built-in dining set is particularly appreciated as it provides them with a dining place of their own where their noise and muss will not bother the grown-ups during a formal dinner.

In large houses, these dining accommodations afford a pleasant and appreciated place at meal time for the servants.

The breakfast or dining nook is steadily increasing in favor. Those who are now enjoying its many benefits would find it very hard to do without the great convenience it brings. Those who install one during the modernizing of an old home will wonder how they ever got along without it.

Graceful Stairways

The stairway, in the out-of-fashion home offers unusual opportunities for modernizing. Sometimes the addition of a graceful balustrade is just the touch needed to make the old stairway a thing of beauty as well as utility.

Treatments of stairways depend largely upon their location and general style. But whether a stairway is located in the hallway or in the living room it can be made a helpful detail in bringing more beauty and charm to its immediate surroundings.

Friendly visitors and important formal guests should be impressed the moment they enter a home. So let the stairway leading upstairs be wide. There is nothing more inviting—nothing more pleasing than the view of a generous stairway with graceful balustrade leading to the floor above, seen from the living room through a beautifully arched doorway.

Often a built-in telephone cabinet or statuary niche at a turn of the stairs furnishes a decorative and practical touch to an already pleasing picture.

Many a plain, unattractive stairway has been modernized and made a thing of beauty, playing an important part in turning an old home into a modern, comfortable and more valuable home.

Left—Stairs with delicately designed balustrade with gracefully curved hand rail.
Right—A serviceable stairway uniting the qualities of strength and gracefulness.
Below—An interesting stairway treatment.

A dining room well lighted through fixture and brackets

Good Lighting and Efficient Wiring Brings Greater Comfort, More Convenience, and Saves Work

Those little wires hidden between the walls of your home have within them the light, color, vision and decorative value that springs forth at your command every time you press a button or pull a cord to light a fixture or lamp.

They have the strength and intelligence of a well trained corps of servants whenever you plug in a labor-saving device or attach an appliance.

Electricity plays a very important part in home life today and new uses for it are constantly developing.

An adequate number of well placed outlets permits the convenient use of the many electrical appliances and labor-saving equipment so necessary in modern home life.

At the touch of a button beautiful lighting effects can be had—lights to suit every mood, every occasion. The soft mellow light in which to sit and talk, or muse. The beautiful light from shaded lamp or fixture when we read. The decorative lighting in recreation, living or dining room. The bright lights of kitchen, basement and laundry.

Lighting equipment today is very flexible—and nothing adds more to the charm and beauty of a room than lighting equipment of the right kind.

Through efficient wiring and an adequate number of convenience outlets, electricity refrigerates and cooks our food. Then, washes and dries the dishes. It furnishes heat, regulates heat, and cleans our houses. Washes and irons our clothes. Gives us music through radio, piano and phonograph. Notifies us when some one is at the door or telephone. Protects our lives and property through alarm systems. In the kitchen, its services can hardly be numbered for there is practically no task there that cannot be done by electricity, done efficiently and without delay.

The modernized home should certainly have modern heating equipment—a central unit with thermostatic heat control. Steadier heat, more heat, and a saving in fuel

Centralizing Heating in the Old Home

Many of the older houses still depend upon stoves for their heat supply because some of these houses were built before the day of modern heating units.

Homes of today are measured largely by the living comfort they afford and it is hard to couple the irksome task of fueling individual stoves with the thought of comfort.

It is not a hard job to install a modern, efficient heating plant in an old home and the added convenience afforded by a centralized heating unit will more than offset the cost of the work.

Modern design and construction makes available to every home owner a heating unit that will exactly meet every individual need and desire.

The various types of heating equipment now so easily procured are too well known to need any detailed description here. All have their advantages, none will fail to bring results, when manufactured by a reliable maker and installed as they should be.

Every preference can be satisfied both as to type, design and size, as well as price.

Homes can be heated efficiently, economically and satisfactorily with the proper equipment through the agency of coal, gas or oil.

Automatically fueled heating plants are no longer an experiment. Much progress has been made in this direction. Millions of home owners today who are using modern equipment are giving no more thought to their heating system than they do to the rising and setting of the sun.

Automatic temperature control has done much to simplify house heating and reduce fuel bills. And, at the same time maintain an even, comfortable room temperature that can be regulated to suit personal preference.

Modern heating equipment and modern methods of installing have made the basement available for many purposes other than storage.

It has added another livable floor to the house. Created beautiful recreation and billiard rooms, sunny playrooms, and cheerful laundries where the family washing is more easily done in pleasanter surroundings.

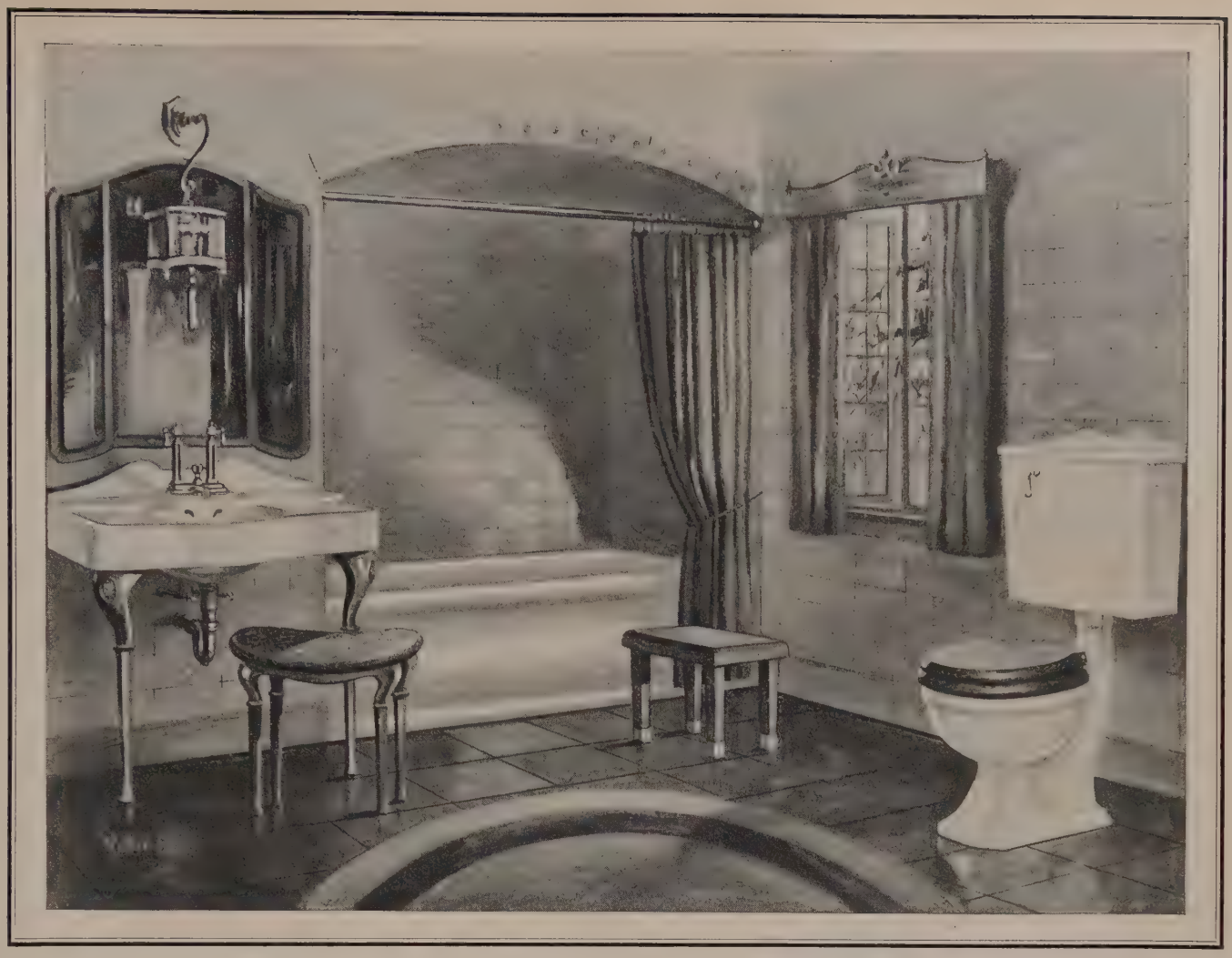
It has made available, space for an additional lavatory, a shower or a complete bathroom and most houses can easily use more than a single bathroom.

Modern heating has done much to raise the standard of living and to bring to the home a fuller measure of convenience and comfort.

Color overflows the walls in warm, cool, gay or subdued tones, and repeats itself in quieter patterns on the floors. The growing appreciation of color in interior decorations and furnishings has found vivid reflection in modern bathrooms.

(Below) Comfort-high sinks, smooth and shining, sanitary and easily kept fresh and clean, bring added comfort and greater convenience to the old kitchen that has been modernized.

(Above) Built-in cabinets and other modern features. A convenient breakfast or dining nook. An instantaneous hot water supply. All of these improvements bring the old kitchen up-to-date.



Proper Plumbing is a Modern Necessity

Modern plumbing fixtures contribute to beauty as well as convenience. Nothing is so easy to detect as out-of-date plumbing—an old fashioned tub, lavatory, toilet or kitchen sink.

Their ugliness is only overshadowed by their awkwardness and, in many cases, their unhealthfulness.

There was never another place so hard to clean, and keep clean, than underneath and behind an old fashioned bath tub.

Up-to-date fixtures are designed for convenient use, easy cleaning, attractiveness and permanence.

Wonderfully attractive is the modern bathroom with its shining, smooth built-in tub. Gracefully molded and low. Easy to get into and out of. A nearby cabinet, or tub fixture, provides a refreshing shower.

There are graceful pedestaled lavatories flanked on either side by lights. There's a sanitary, noiseless toilet, in glistening white or color.

Every home can use more than a single bathroom and complete bathrooms can be installed in limited space.

In the kitchen we find comfort-high sinks with single or double drain boards. Swinging mixer faucets that furnish a supply of water, hot or cold, or correctly tempered, just where and when it is wanted.

The basement houses a model laundry and an automatic water heater so that an ample, constant supply of water is available at any hour, day or night, and at all seasons of the year, for the many purposes for which hot water is a vital necessity.

Modern plumbing practice and fixtures bring to the home not only convenience and comfort but beauty and charm as well. Artistic design and careful manufacturing methods have placed modern plumbing on the highest plane—and with the wide price range any home owner can easily find up-to-date plumbing fixtures well within his ideas of what he wishes to pay.

A roof must stem the tide of the elements, must protect as well as beautify, it must be substantial and good for years of service.

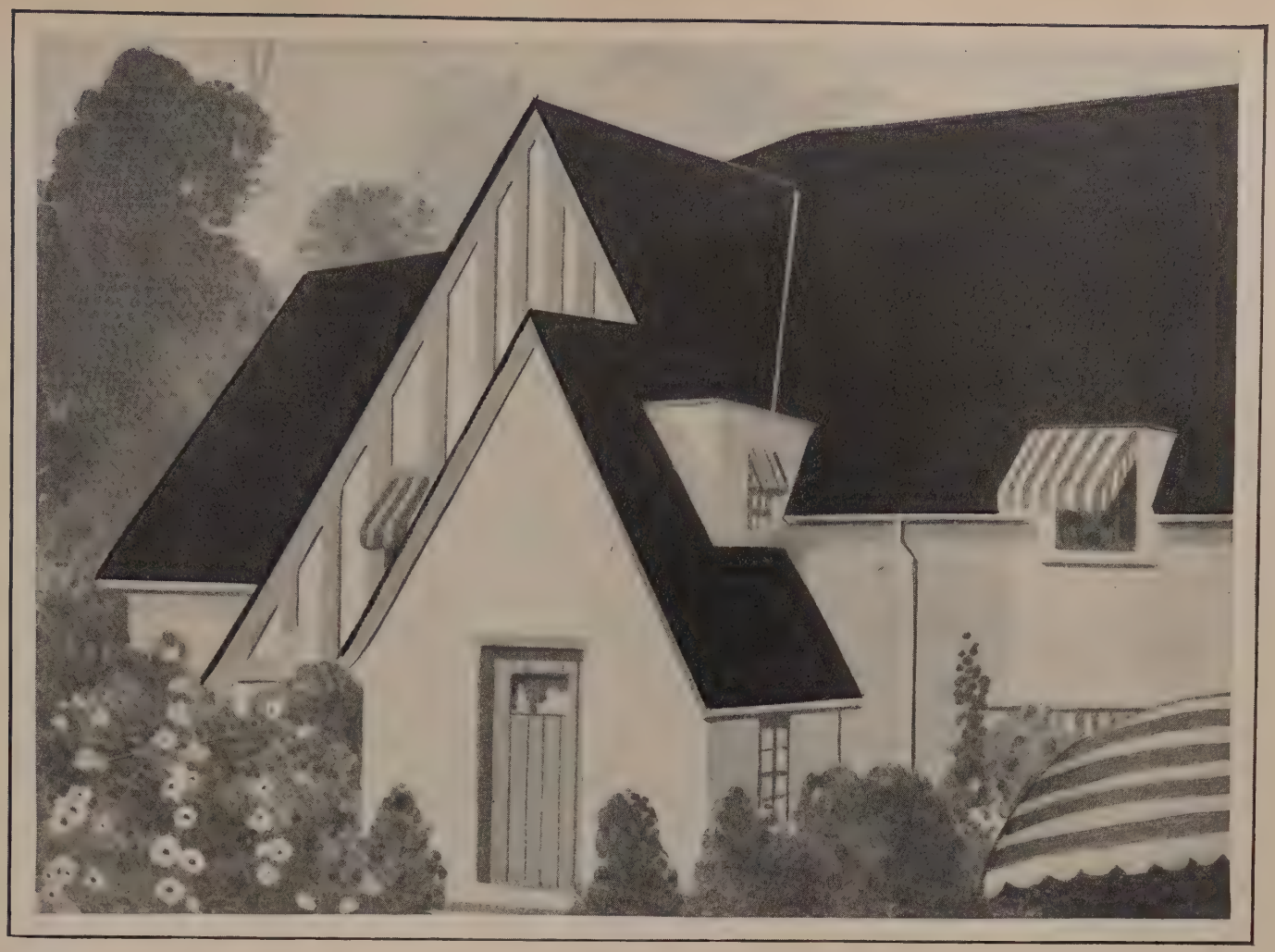
New roofing is easily applied right over the old in many instances, bringing a fresh appearance to the home.

Note how largely the roof is effective in giving a distinctive appearance to the new houses about you.

The types of roofs on the homes of today are the results of long experience with climatic conditions. It is an interesting study to trace the influence of the weather on the design of roofs the world over. Ancient Egyptian temples had flat roofs because Egypt is a dry country and there was no necessity to provide drainage for rainfall. The Greek and Roman temples had sloping roofs as it was necessary to provide drainage for rain water in those countries. The houses of Norway and Sweden have very steep roofs designed to shed the heavy snowfalls as they descend. Roofs of homes in America chiefly reflect the Dutch and English influences. They are often patterned after the gable or gambrel type adopted by the English settlers in New England, or the more flowing lines of roof—also gambrel type—so popular with the Dutch colonists of New Amsterdam.

There are so many types and kinds of roofing and roofing material available that every taste can be gratified.

If a roof lacks lasting qualities, painting and patching is fighting a losing battle. It takes a real roof to outgame the elements.



Roof Lines and Roofing

Probably no one thing in the wide scope of modernizing can do more to change and improve the appearance of an old house than a change of roof line.

On every hand we see too many houses of bygone days that are conspicuous through their homeliness. Houses that may be comfortable and cheerful inside but repellent and unattractive from without.

Through the transformation brought about by modernizing, old harsh roof lines are changed and softened into the graceful, pleasing lines of modern architecture and enduring beauty.

Dormers can be arranged to break roof lines that are too severe, in pleasing fashion, and, dormers not only serve to bring about a change in appearance but they give more space and light to the interior. Sometimes the removal of a dormer aids in a modernizing plan.

Low sweeping curves of roof may give just the needed touch to a home that sadly lacks exterior attractiveness or sometimes straight lines or angles may be added to advantage.

Often a new roof to replace one that has outlived its usefulness may be the only work necessary to bring new life, new beauty, new value to a house that appears shabby and old.

Roofs of beautiful texture, exceptional wearing qualities and comparatively low cost are available.

A roof can be lifted, perhaps, to give it a smartly sloping angle, or it may be lowered to add dignity and repose to the home that reaches too high towards the heavens. The proper pitch of a roof is of the greatest importance.

While a certain type of roof may harmonize with a certain style of home, it may be entirely out of place on another.

These things should always be taken into consideration in selecting a roof; the style of the house, the durability and beauty of the roofing material and the home builder's pocketbook.

Higher first cost usually means lower upkeep and longer life, because quality in roofing is just the same as quality in anything else.

Where an old roof is only to be renewed the work is a very simple matter.

Changing the roofline naturally represents a bigger job but, often, very simple changes in this respect bring strikingly attractive improvements in appearance not only to the roof itself but to the whole exterior of the home and its surroundings as well.

For Material needed in
New or Modernized Construction
Use
Manufacturers' Catalogs
Pages 7-320

HOUSE PLAN SECTION

The Plan Service
available
in connection with
HOME BUILDERS
CATALOG

For
Special Homes
Designed to Order
See Page 848

A Practical and Accurate Plan Service

For Dealers, Building Contractors and Home Owners

The Plan Service available in connection with HOME BUILDERS CATALOG is the most comprehensive, practical and accurate service of its kind ever devised for the use and benefit of building contractors and others interested in home building. It is the service adopted and used by many of the leading associations in the building field.

Every one of the 460 homes of frame, brick, brick veneer, tile, stucco finish, cement block and stone construction and the garages illustrated in this authoritative reference work of home building have actually been built. You can see in HOME BUILDERS CATALOG an illustration of a home or garage *just as it will appear when finished* because all illustrations are made from actual photographs, showing the building in its setting of trees, lawns, flowers, etc. And, home owners like this idea of actual photographic illustrations, instead of imaginary drawings of what their future home is to be.

HOME BUILDERS CATALOG has a large and competent force of architects, designers, architectural draftsmen, engineers and estimators—all practical men with long and broad experience, and proven ability. Men who are specialists in small house design and construction.

The homes and other structures shown in HOME BUILDERS CATALOG are thoroughly modern in every detail, yet designed with so complete and practical a knowledge of building materials and construction methods, that a builder is enabled to keep the price within the limits the average home owner can afford.

Because of our long experience and thorough knowledge of this line of work, our large and capable staff of building experts, and the enormous volume of business we do, we are able to produce and furnish complete and accurate blue-print plans, specifications, material lists, etc,, of higher quality and at a lower price than can be procured from any other reliable source.

This edition of HOME BUILDERS CATALOG contains the best assortment of original, attractive and modern homes ever published. It should completely meet the desires of every prospective home owner and fully meet the needs of every enterprising building contractor.

All homes were selected for their distinctive architectural merits and adaptability to the modern trend in home design and construction.

The illustrations in Plan Section include:

182 Homes of Frame Construction
12 Summer Cottages
118 Homes of Brick Construction
16 Homes of Tile Construction
44 Homes of Stucco Finish
6 Homes of Cement Block Construction
6 Homes of Stone Construction
4 Gasoline Filling Stations
72 Garages of Popular Types

Detailed Blue-Print Working Plans

The blue-prints for each home and garage include all elevations, floor plans, sections, dimensions, notations, and other details necessary to enable the building contractor to erect with a perfectly clear understanding. Nothing is left to guesswork which insures against errors and saves much in time and labor.

Special Plans and Changes

We maintain a Service Department for the purpose of originating and producing special plans to order. Standard plans can be revised to conform to the wishes of building contractors and their clients who may desire to make changes or incorporate some idea of their own. This work as a rule requires only a short time depending, of course, upon the amount of work involved, and the charges are very reasonable.

Classified Guide for Listing Quantity of Materials

This consists of 16 pages bound in systematic form that enables the builder to take off quickly and accurately quantities of the desired materials without danger of omitting important items.

Specifications

With each set of plans are furnished blank specifications which enable the contractor to easily fill in the details to cover each home fully, and erect a building in a manner satisfactory to the owner. These forms state clearly all the general conditions necessary for the complete construction of the building.

Building Contract

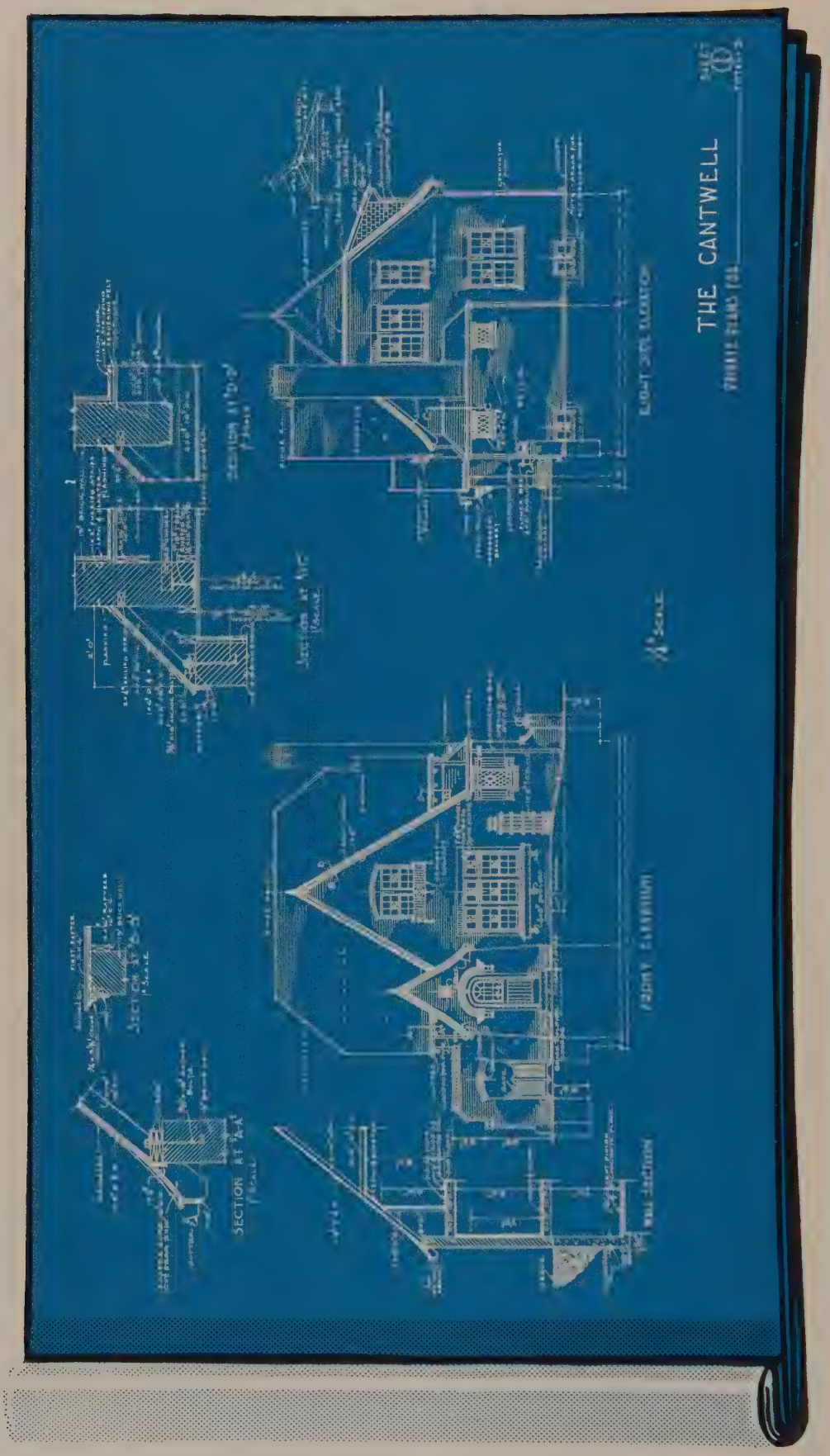
These forms, which should be signed by the building contractor and home owner, are properly arranged and carefully worded. Thus all understandings and agreements between both parties are clear and concise, and in writing, which guards against misunderstandings and disputes during construction or after completion of the building.

There is only a small charge for the entire service which is so thoroughly complete, so carefully prepared, and so accurate that no builder can afford to do without it.

Reproductions of the various details of this Service will be found on the following pages.

SPECIMEN OF BLUE PRINT WORKING PLANS

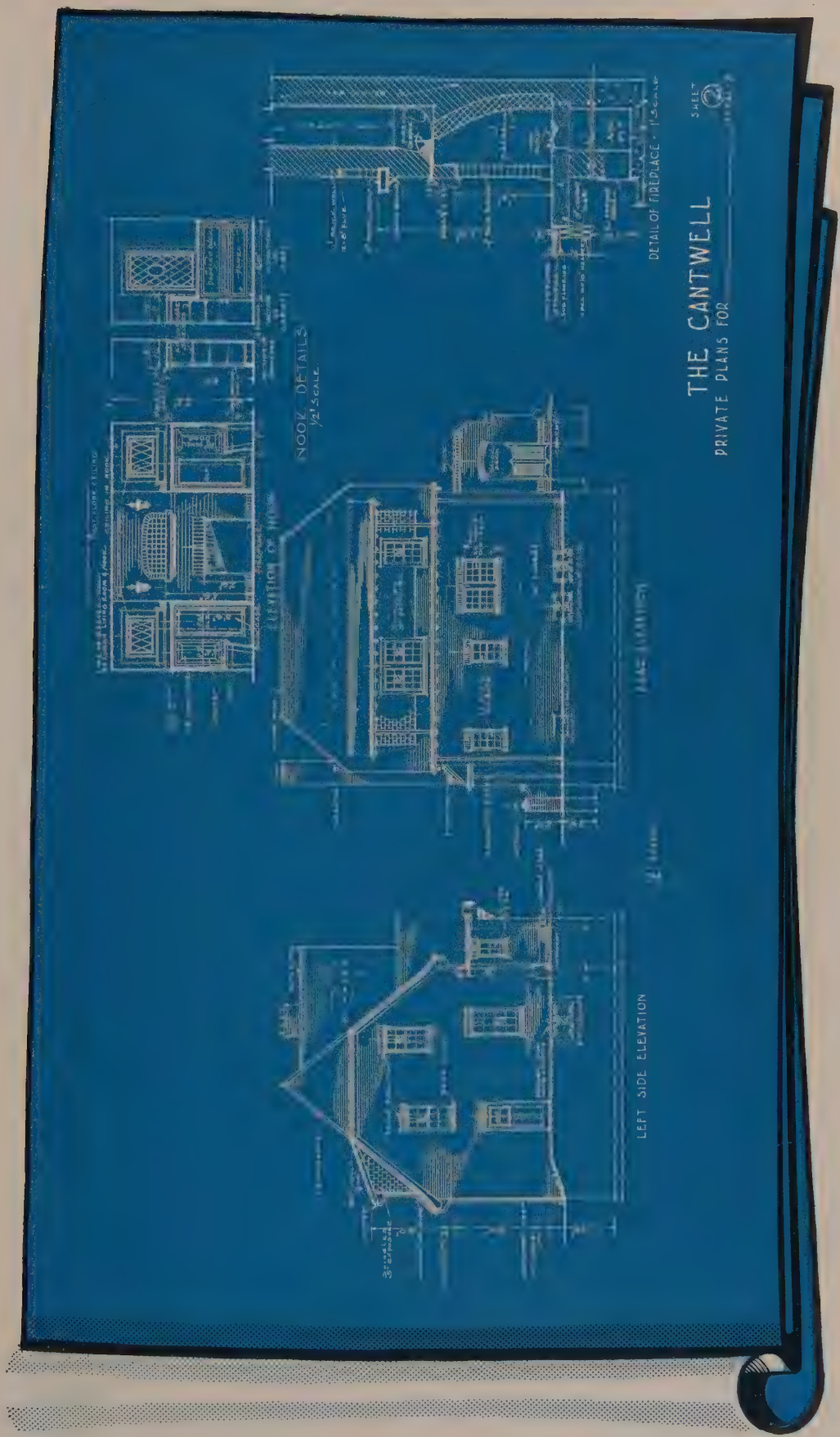
ILLUSTRATION ¼ ACTUAL SIZE



Sheet No. 1 of the complete 3-sheet set of plans. All elevations and floor plans are made to a standard scale of ¼-inch to foot.

SPECIMEN OF BLUE PRINT WORKING PLANS

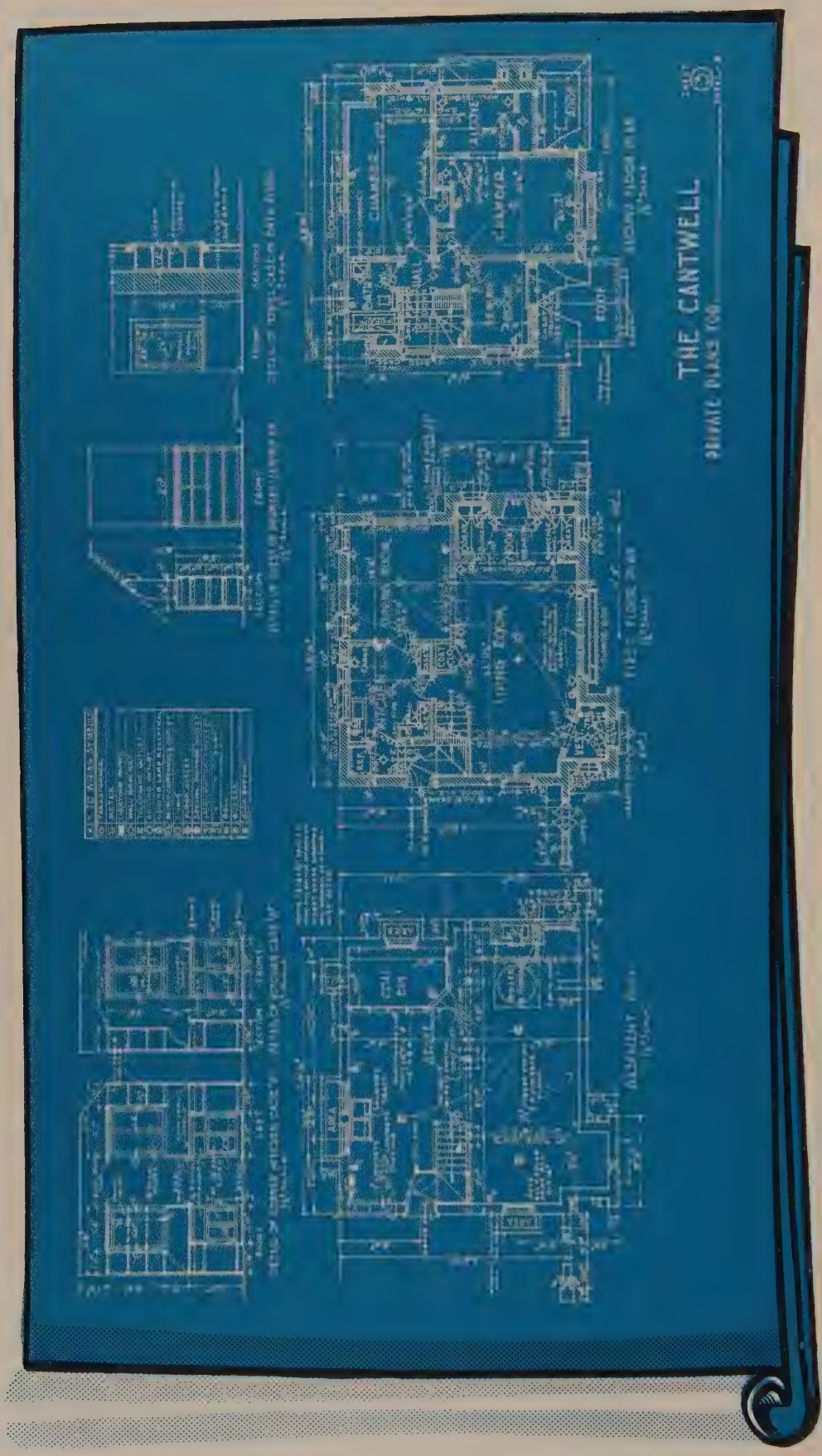
ILLUSTRATION ¼ ACTUAL SIZE



Sheet No. 2 of the complete 3-sheet set of plans. All elevations and floor plans are made to a standard scale of ¼-inch to foot.

SPECIMEN OF BLUE PRINT WORKING PLANS

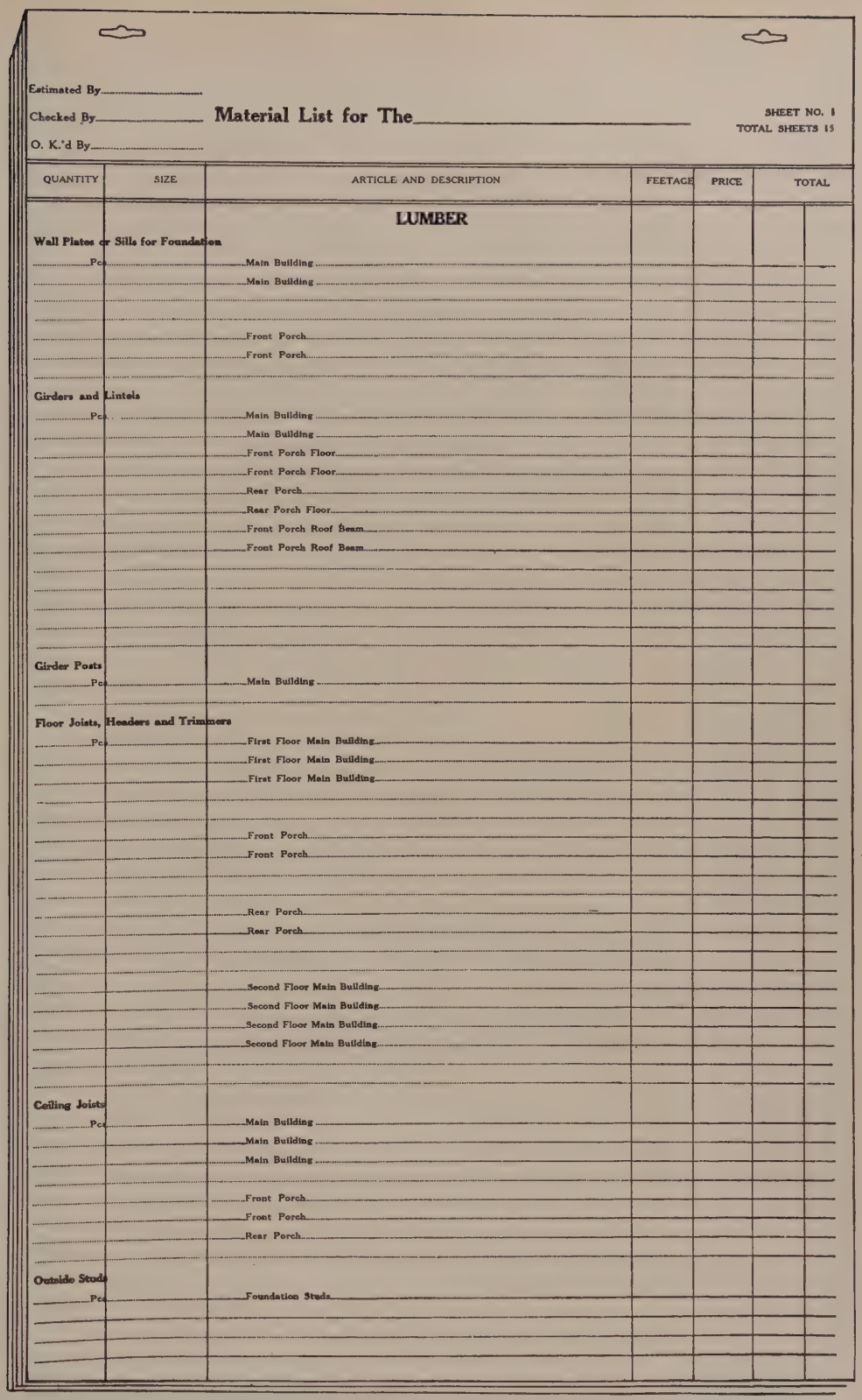
ILLUSTRATION ¼ ACTUAL SIZE



Sheet No. 3 of the complete 3-sheet set of plans. All elevations and floor plans are made to a standard scale of ¼-inch to foot.

Material Listing Guide

One complete listing guide of materials—16 pages. This list is divided into sections covering foundation material, lumber, millwork, roofing, flooring, plaster, paint, hardware, etc. Nothing omitted. If you use this list you will be sure that every essential item of material is included in your estimate. Saves hours of time and prevents costly omissions.



Estimated By.....
Checked By..... **Material List for The**.....
O. K.'d By.....

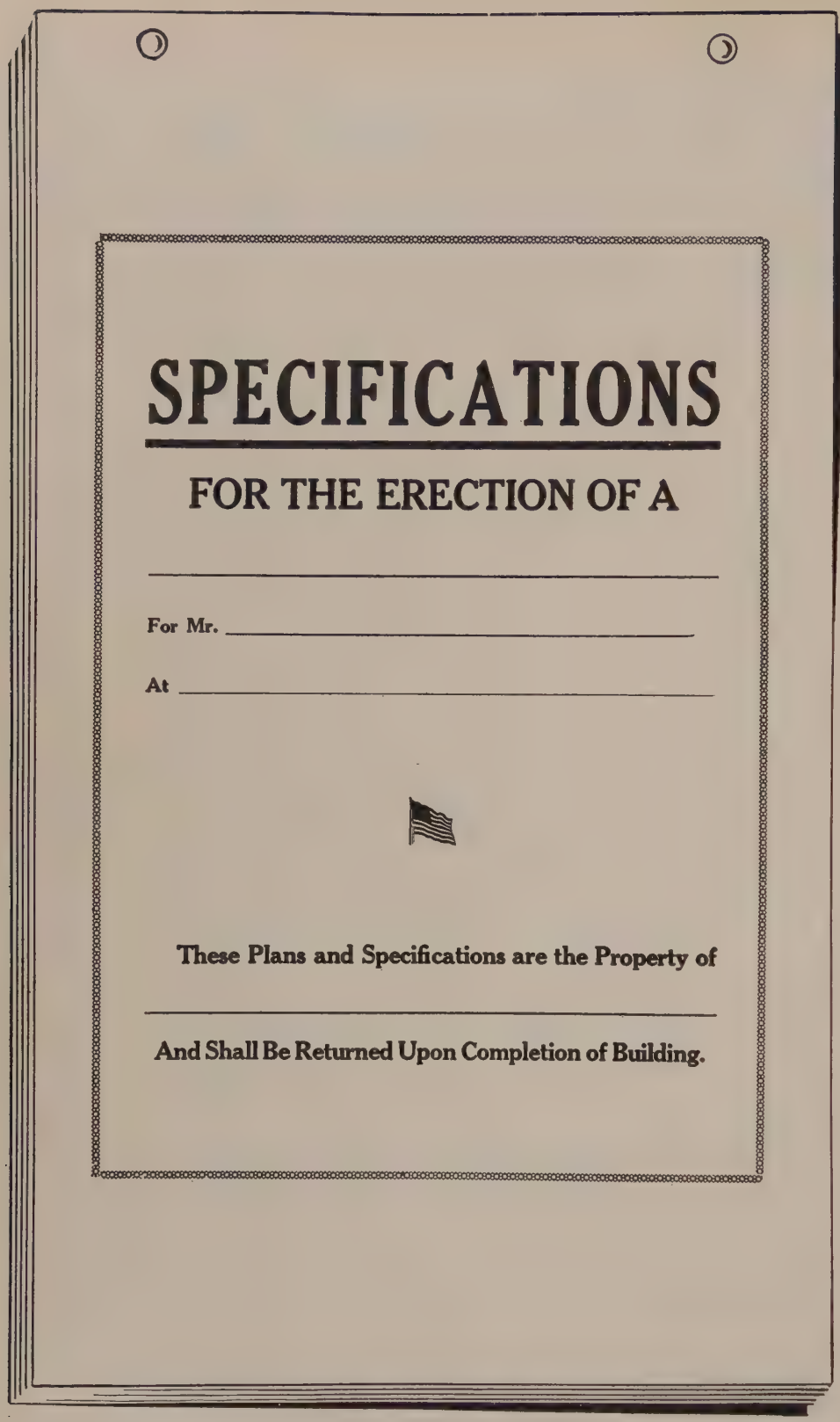
SHEET NO. 1
TOTAL SHEETS 15

QUANTITY	SIZE	ARTICLE AND DESCRIPTION	FEETAGE	PRICE	TOTAL
		LUMBER			
		Wall Plates or Sills for Foundation			
Pcs.		Main Building			
		Main Building			
		Front Porch			
		Front Porch			
		Girders and Lintels			
Pcs.		Main Building			
		Main Building			
		Front Porch Floor			
		Front Porch Floor			
		Rear Porch			
		Rear Porch Floor			
		Front Porch Roof Beam			
		Front Porch Roof Beam			
		Girder Posts			
Pcs.		Main Building			
		Floor Joists, Headers and Trimmers			
Pcs.		First Floor Main Building			
		First Floor Main Building			
		First Floor Main Building			
		Front Porch			
		Front Porch			
		Rear Porch			
		Rear Porch			
		Second Floor Main Building			
		Second Floor Main Building			
		Second Floor Main Building			
		Second Floor Main Building			
		Ceiling Joists			
Pcs.		Main Building			
		Main Building			
		Main Building			
		Front Porch			
		Front Porch			
		Rear Porch			
		Outside Studs			
Pcs.		Foundation Studs			

MATERIAL LISTING GUIDE

Reduced Facsimile of Material Listing Guide—Actual Size 8 1/2 x 14 Inches

16 PAGES TO EACH LISTING GUIDE


SPECIFICATIONS
FOR THE ERECTION OF A
For Mr.
At
These Plans and Specifications are the Property of
And Shall Be Returned Upon Completion of Building.

Specifications

These forms are carefully and intelligently arranged, and completely specify all workmanship. They enable a contractor to easily fill in the quality and kinds of material decided upon to cover a home fully, and erect the building in a manner entirely satisfactory to the owner. General conditions necessary for the complete construction of the building are clearly stated.

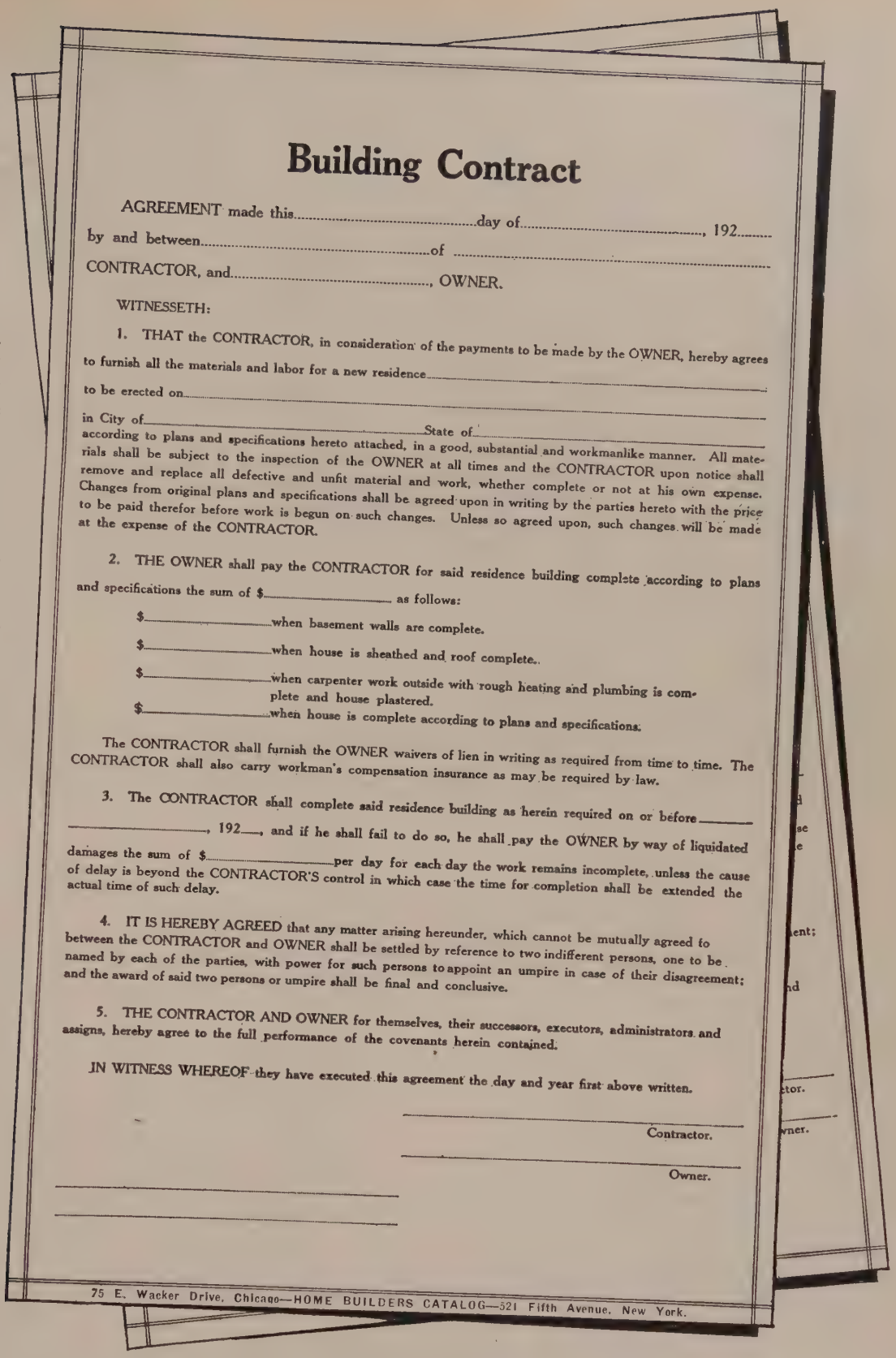
BUILDING SPECIFICATIONS

Reduced Facsimile of Specifications—Actual Size 8½ x 14 Inches

24 PAGES TO EACH SPECIFICATION

Building Contract

These forms, which should be signed by building contractor and home owner, are carefully worded and properly arranged. Thus all agreements and understandings between both parties are clear and concise, and in writing, which guards against disputes during construction or after completion of the building.



Building Contract

AGREEMENT made this.....day of....., 192.....

by and between.....of .....

CONTRACTOR, and....., OWNER.

WITNESSETH:

1. THAT the CONTRACTOR, in consideration of the payments to be made by the OWNER, hereby agrees to furnish all the materials and labor for a new residence.....

to be erected on.....

in City of.....State of.....

according to plans and specifications hereto attached, in a good, substantial and workmanlike manner. All materials shall be subject to the inspection of the OWNER at all times and the CONTRACTOR upon notice shall remove and replace all defective and unfit material and work, whether complete or not at his own expense. Changes from original plans and specifications shall be agreed upon in writing by the parties hereto with the price to be paid therefor before work is begun on such changes. Unless so agreed upon, such changes will be made at the expense of the CONTRACTOR.

2. THE OWNER shall pay the CONTRACTOR for said residence building complete according to plans and specifications the sum of $..... as follows:

$.....when basement walls are complete.

$.....when house is sheathed and roof complete.

$.....when carpenter work outside with rough heating and plumbing is complete and house plastered.

$.....when house is complete according to plans and specifications.

The CONTRACTOR shall furnish the OWNER waivers of lien in writing as required from time to time. The CONTRACTOR shall also carry workman's compensation insurance as may be required by law.

3. The CONTRACTOR shall complete said residence building as herein required on or before _____, 192..., and if he shall fail to do so, he shall pay the OWNER by way of liquidated damages the sum of $.....per day for each day the work remains incomplete, unless the cause of delay is beyond the CONTRACTOR'S control in which case the time for completion shall be extended the actual time of such delay.

4. IT IS HEREBY AGREED that any matter arising hereunder, which cannot be mutually agreed to between the CONTRACTOR and OWNER shall be settled by reference to two indifferent persons, one to be named by each of the parties, with power for such persons to appoint an umpire in case of their disagreement; and the award of said two persons or umpire shall be final and conclusive.

5. THE CONTRACTOR AND OWNER for themselves, their successors, executors, administrators and assigns, hereby agree to the full performance of the covenants herein contained.

IN WITNESS WHEREOF they have executed this agreement the day and year first above written.

_____
Contractor.

_____
Owner.

_____

_____

75 E. Wacker Drive, Chicago—HOME BUILDERS CATALOG—521 Fifth Avenue, New York.

BUILDING CONTRACTS

Reduced Facsimile of Building Contract—Actual Size 8½ x 14 Inches

TWO OF THESE CONTRACT FORMS WITH EVERY TWO SETS OF BLUEPRINT WORKING PLANS

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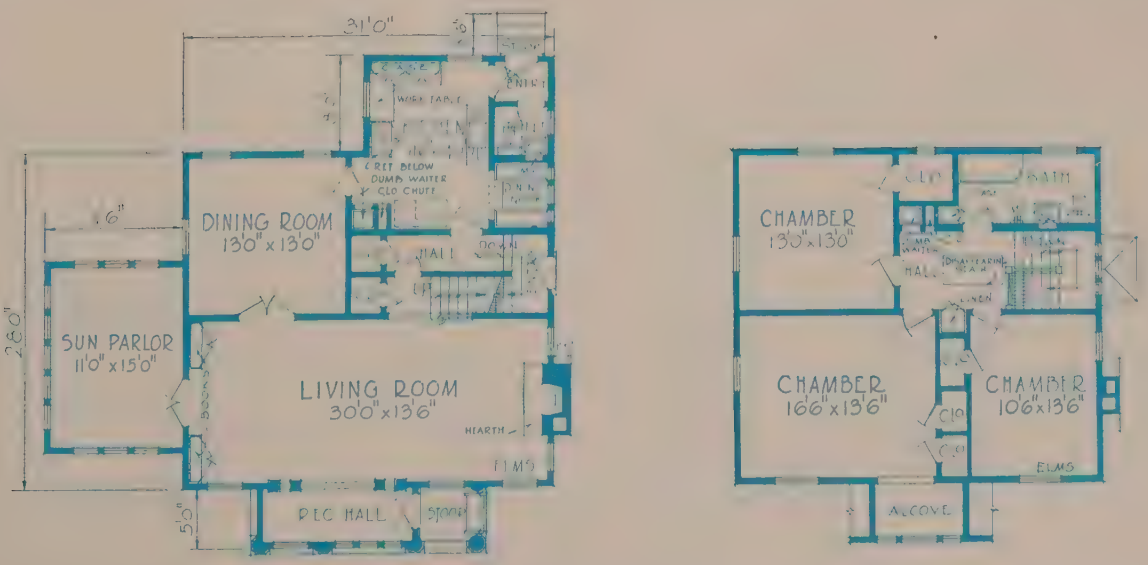
6 Rooms, Bath, Toilet, Dining Nook and Sun Parlor

The ELMS

A GRACEFUL design employing white siding for the walls and a thatch roof. Good window groupings and plenty of light for a well planned interior. Note the many built-in conveniences such as dumb-waiter, clothes chute, dining nook, disappearing stairs, linen closet. The entrance opens to a reception hall which forms part of a big living room.



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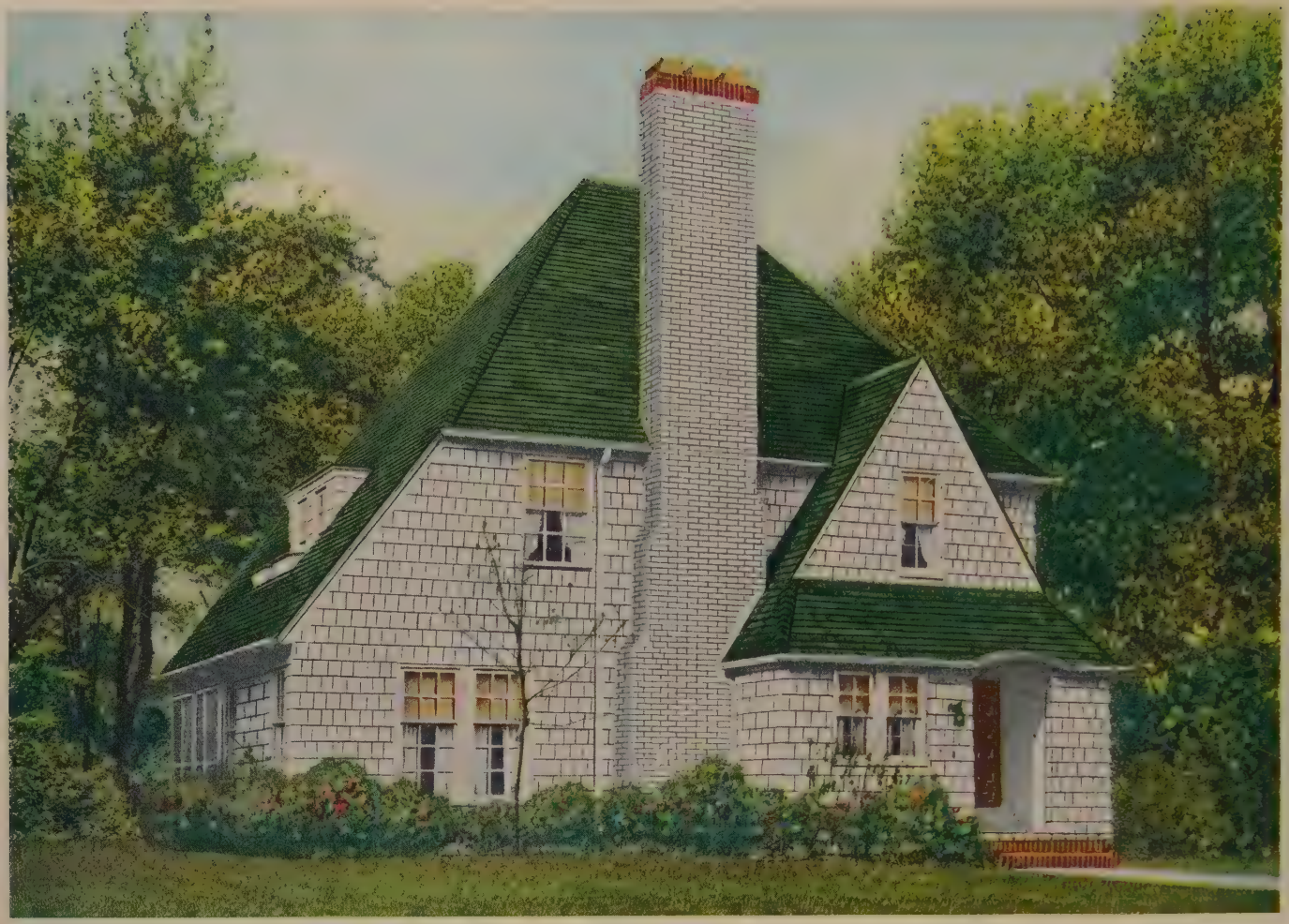
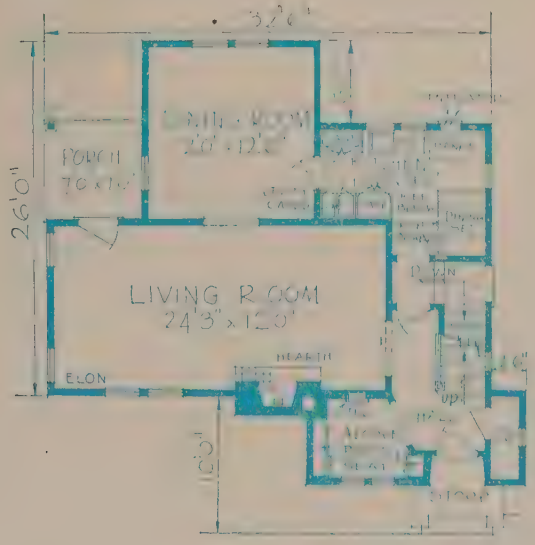


5 Rooms and Bath

The ELON

SHINGLED walls, and unusual roof lines with a chimney built of common brick give this house its home-like appearance. The living room is unusually large and contains a natural fireplace. Built-in dining set, ironing board, disappearing stairs, and other conveniences including a ventilator in the kitchen over the range. Suitable to any location.



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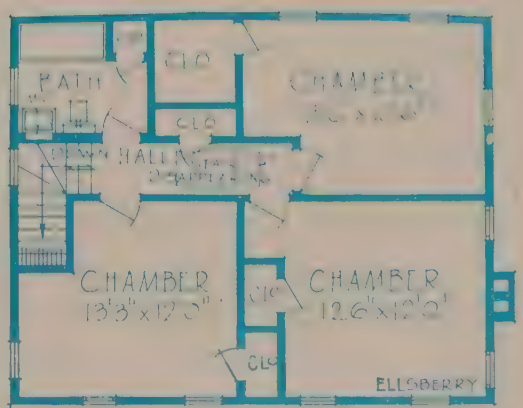
6 Rooms and Bath

The ELLSBERRY

SHINGLED walls, shuttered windows, a characterful entrance, and a typical colonial chimney are outstanding architectural features of this well designed home. The excellent arrangement of rooms with many built-in conveniences and the disappearing stairs give an exceptional amount of living space. The good sized living room has a fireplace.



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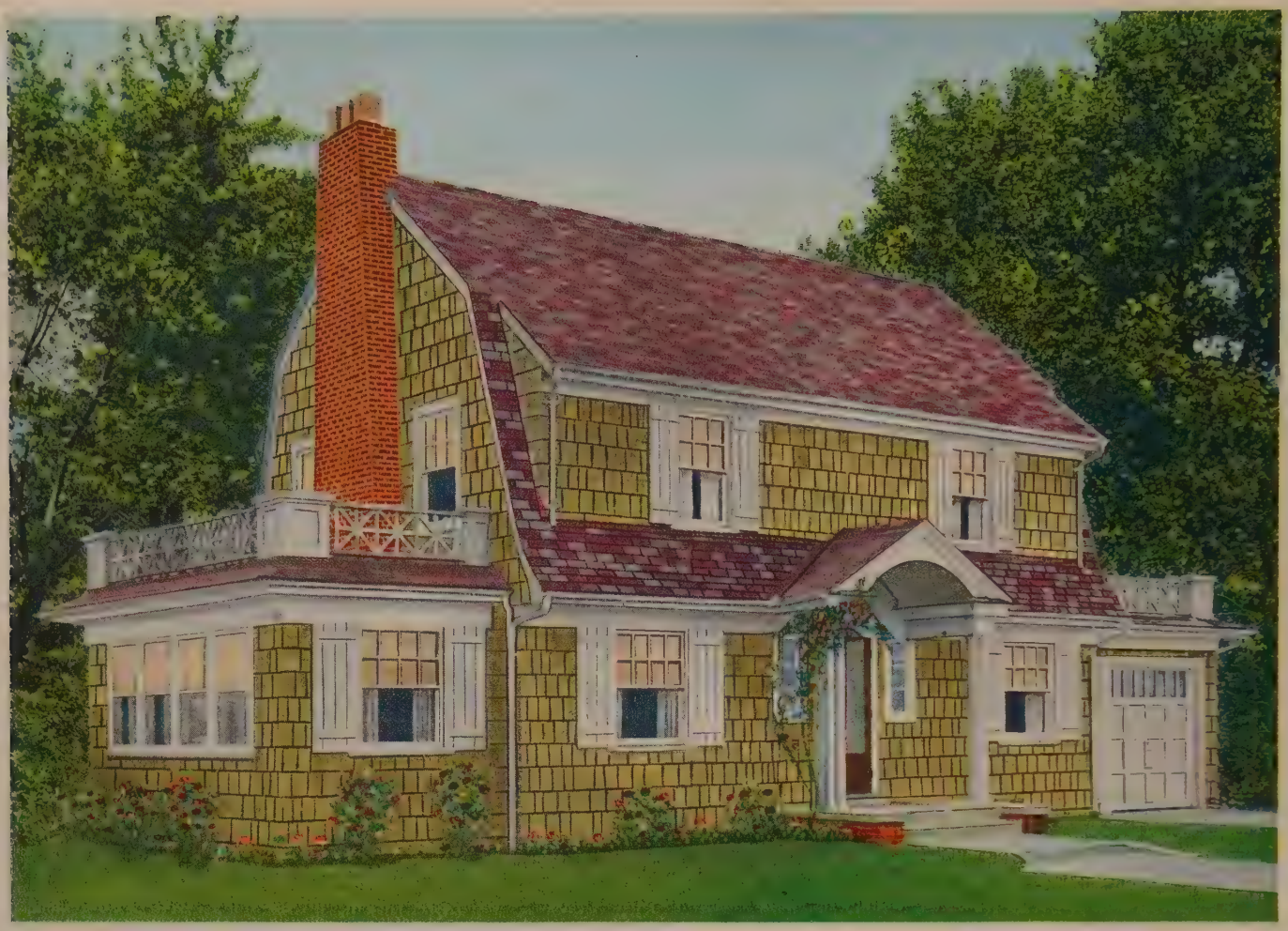
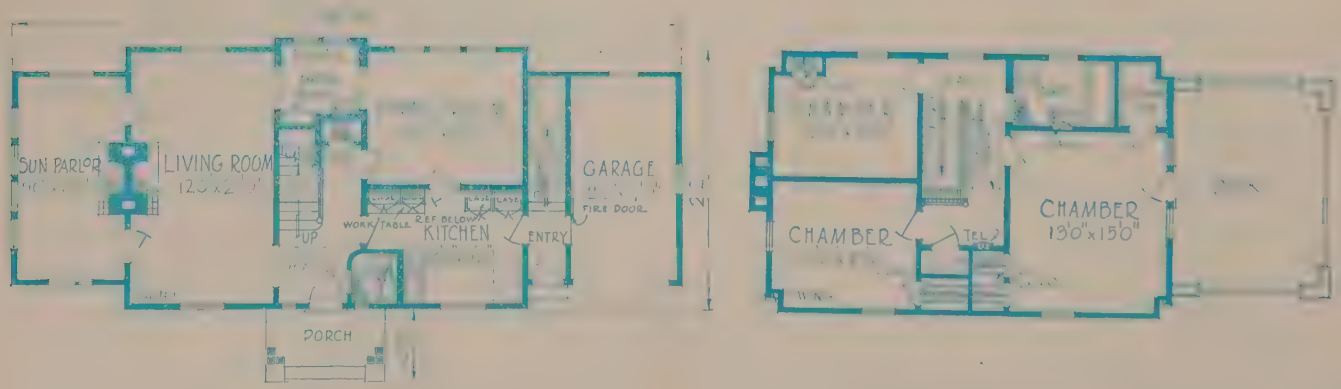


6 Rooms, Bath, Toilet, Nook, Sun Parlor and Garage

The EWING

A HOME of shingled walls with gambrel roof, dormer windows, and attractive entrance. On one end the sun room and on the other a garage. Compact and carefully planned interior with an extra toilet on the first floor affords every convenience and living comfort that could be desired. Both living room and sun room have a natural fireplace. The kitchen is planned to save time and unnecessary steps. Disappearing stairs give entrance to the attic from the upstairs hall. Space saving closet fixtures are used.



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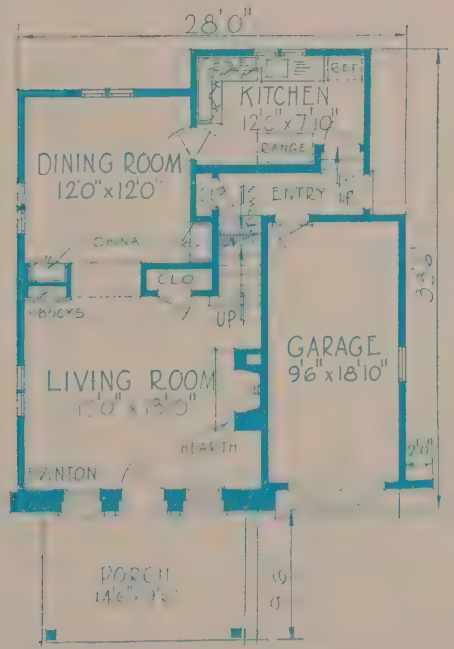
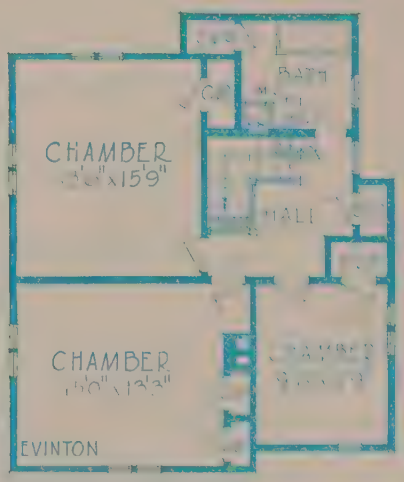
6 Rooms, Bath and Garage

The EVINTON

A COMBINATION of stone, half timber, and shingled walls, with a built-in garage. An interior arrangement designed to give maximum comfort and convenience with many built-in features such as bookcases in living room, utility cabinets in kitchen, etc.





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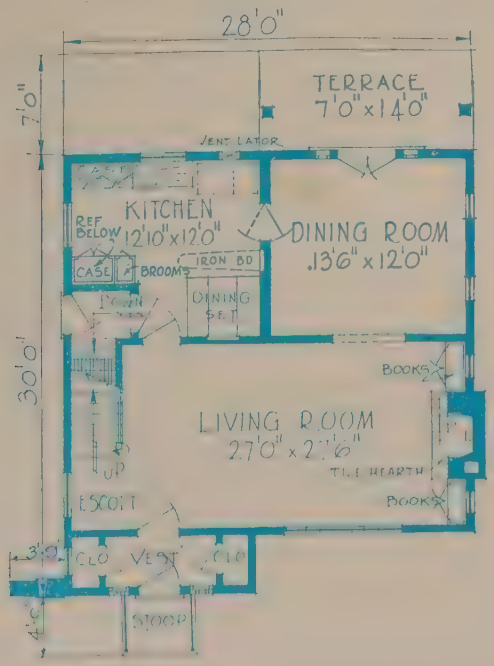
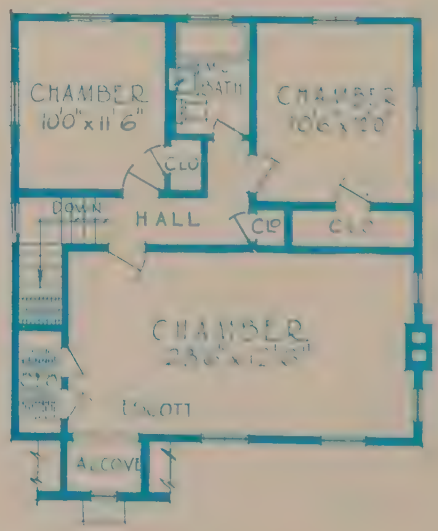
6 Rooms and Bath

The ESCOTT

AN INVITING home of shingle and stucco with an exceptionally large living room. Note the splendid arrangement of second floor, the large alcoved chamber at front.





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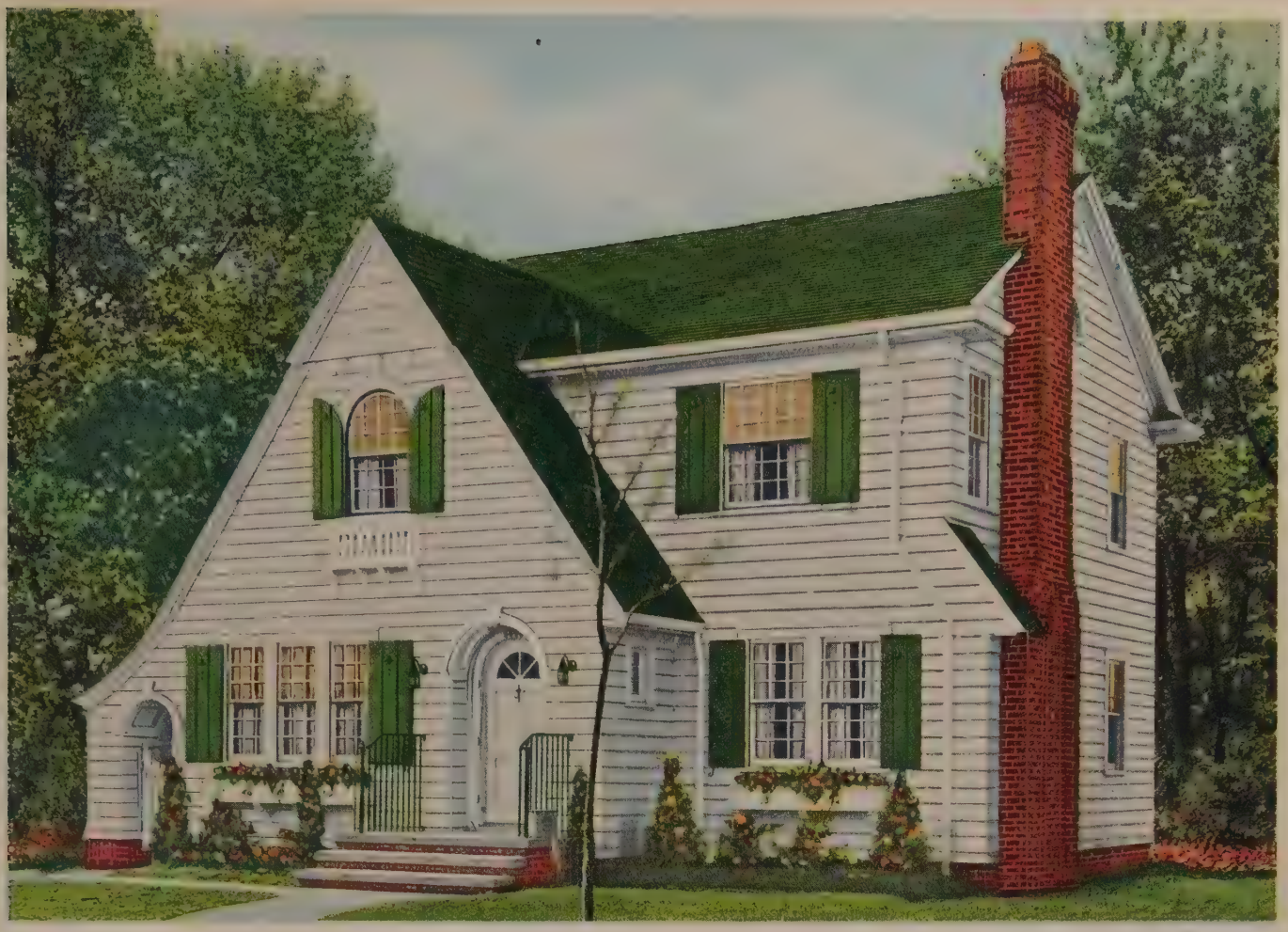
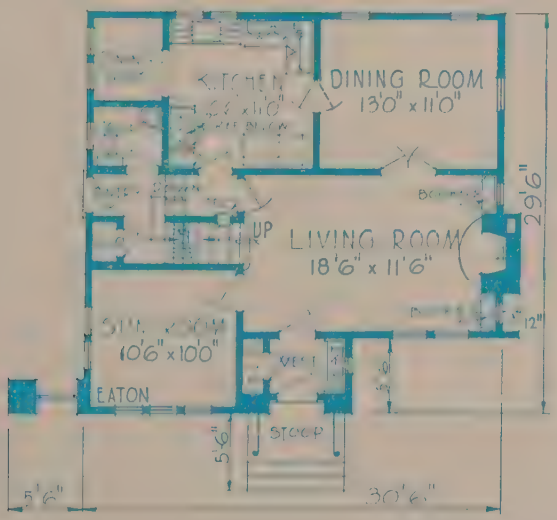
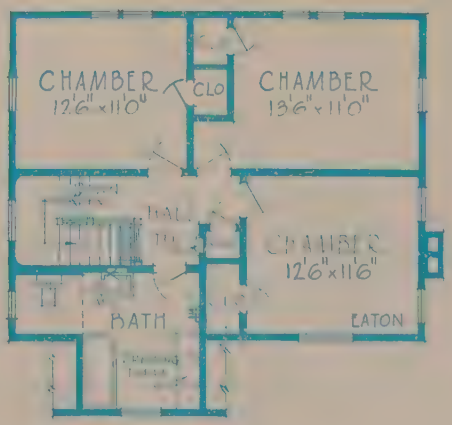


6 Rooms, Bath, Toilet and Sun Room

The EATON

A CHARMING home—white siding walls on brick foundation. The broken rooflines, heavy shutters, iron porch railings and window boxes are highly decorative. The interior arrangement is designed to meet the requirements of the most exacting home owner. Dining nook, large fireplace, built-in bookcases, built-in dressing table in the bedroom, and many other desirable features are provided for in the plans shown below.





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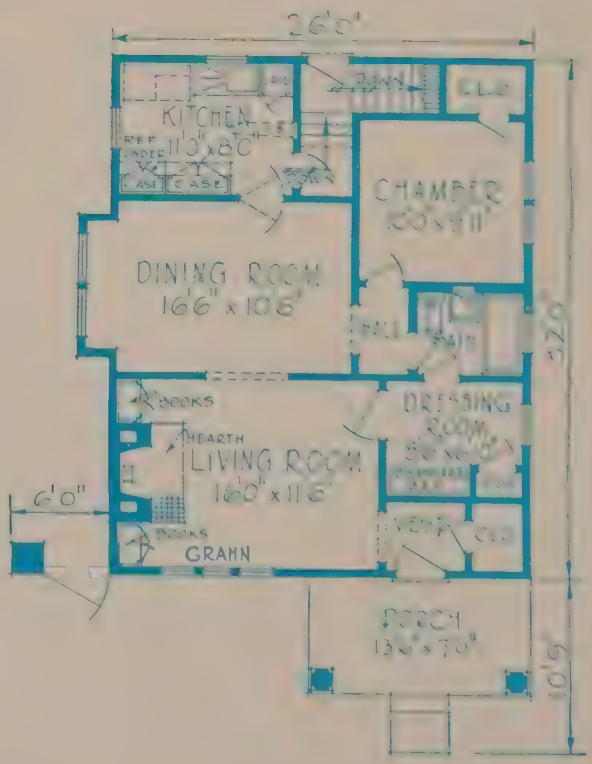
4 Rooms, Bath and Dressing Room

The GRAHN

WHITE siding walls go well with this simple yet attractively designed home. A three-window group serves the living room which has massive fireplace and built-in bookcases. Kitchen is arranged to meet modern needs, including many built-in conveniences. Dressing room includes disappearing bed.



A garden trellis that may be used to good effect with this home.

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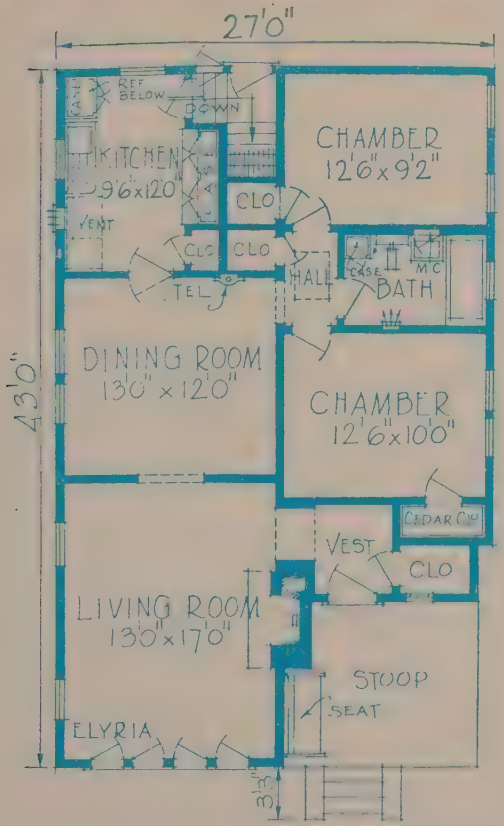
5 Rooms and Bath

The ELYRIA

THIS attractive home with its colorful shingle walls, impressive chimney and stoop of face brick offer much in interior convenience and comfort. There is a special arrangement of windows, an attractive porch seat and many built-in conveniences, including a cedar lined closet.



Shingled wall garage, same architectural style and treatment as house

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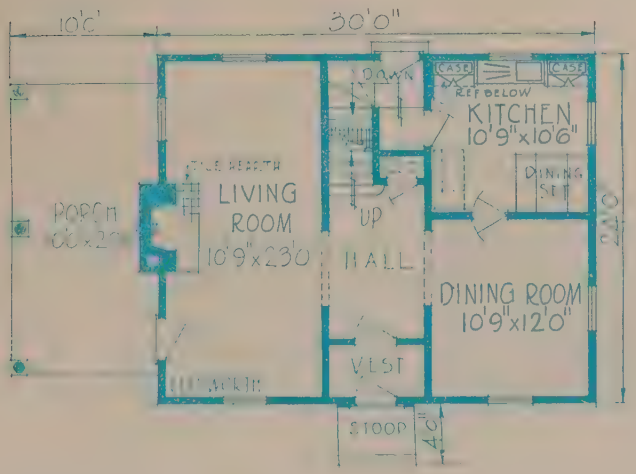
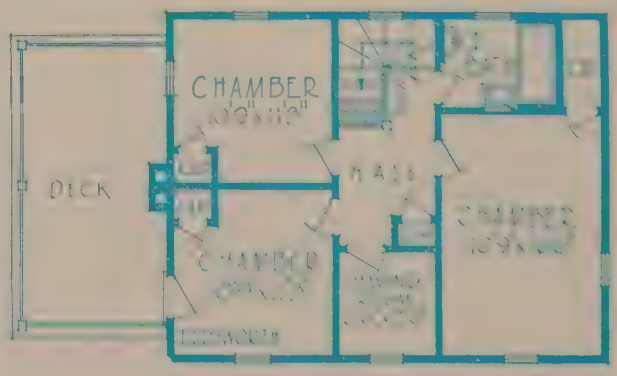
6 Rooms, Bath and Sewing Room

The ELLSWORTH

HERE is a home that loses nothing in architectural merit through its sturdy, substantial appearance. There is a large open porch, a big living room, a model kitchen conveniently equipped. The second floor includes a handy sewing room and there is ample closet space. Note splendid arrangement of rooms. Living room extends entire depth.





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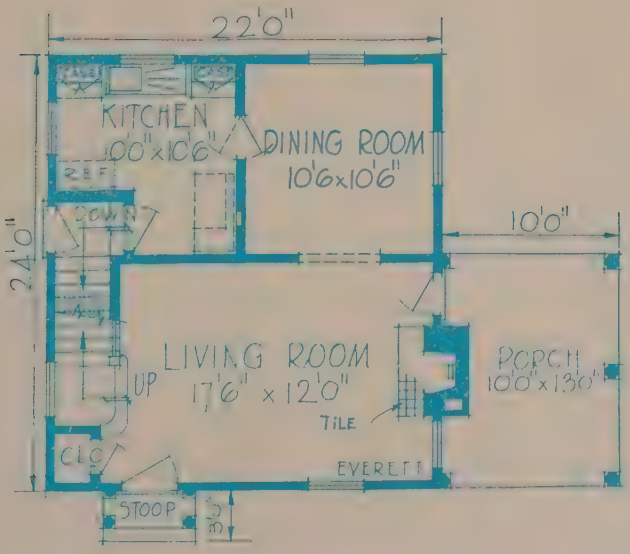
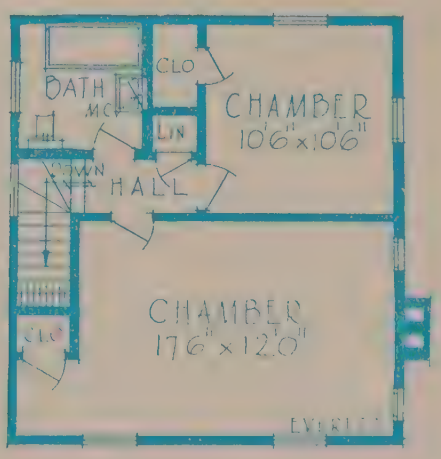
5 Rooms and Bath

The EVERETT

MUCH COMFORT and convenience is built into this quaint little home of five rooms and bath. Note the convenient arrangement of rooms, their size, and the closet space.





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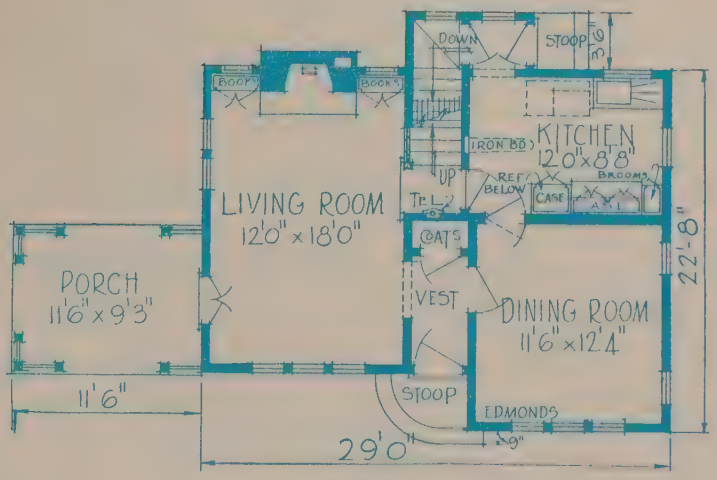
5 Rooms and Bath

The EDMONDS

SHINGLES, brick and stucco are pleasingly combined in this striking exterior, with its unusual roof lines and out of the ordinary treatment. A study of the floor plans will show that every thought has been given to bring convenience and comfort. Even a cedar chest is among the many built-in features, that include kitchen and broom cabinets, etc.



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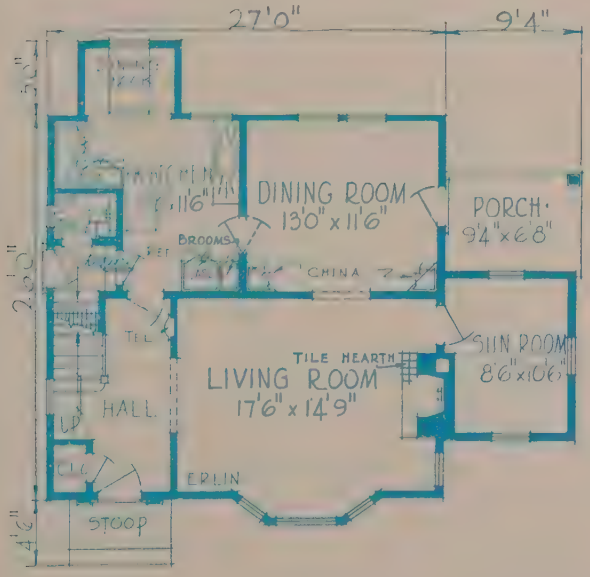
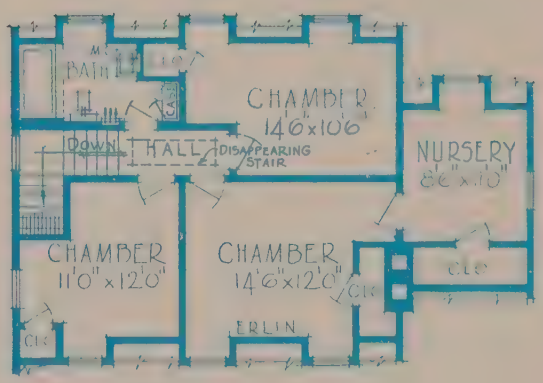
6 Rooms, Bath, Sun Room, Dining Nook and Nursery

The ERLIN

THE steep downward pitch of the roof is broken by the quaint dormer windows that look out upon a charming landscape. Walls are of shingles and the small pane windows go particularly well with an exterior of this type. There is a well arranged interior.





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6 Rooms and Bath

The ELSWICK

THE blue-gray shingles of the exterior contrast pleasingly with the red and buff of brick and stucco at entrance way. There is a splendid interior arrangement, ample closet space, and many built-in features that will save work and increase living comfort.

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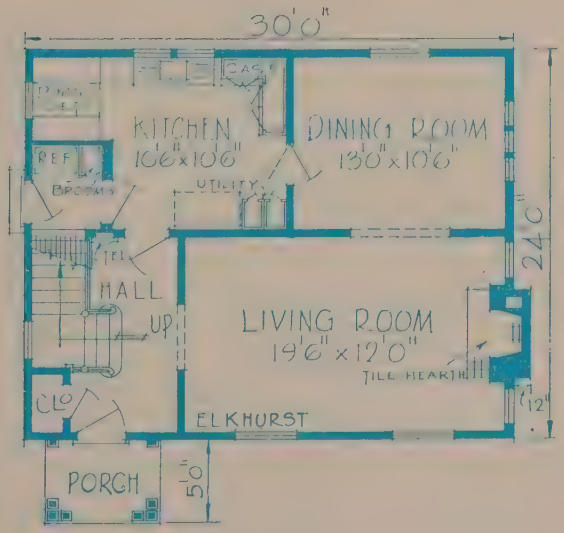
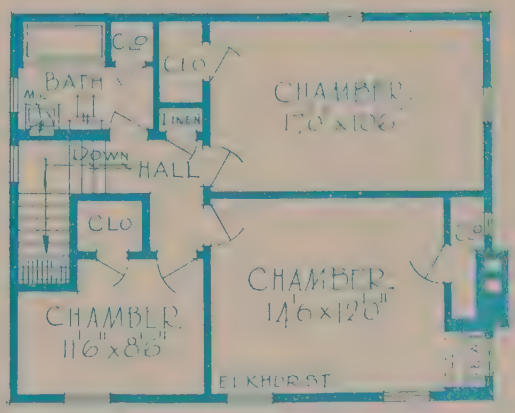
6 Rooms, Bath and Dining Nook

The ELKHURST

A SOLID, substantial looking home with shingled walls and well spaced windows. The green window shutters against the white front wall together with the entrance porch design make a pleasing contrast. A dining nook, natural fireplace, linen closet, and built-in conveniences are provided for. These include utility and broom cabinets, phone nook, etc.





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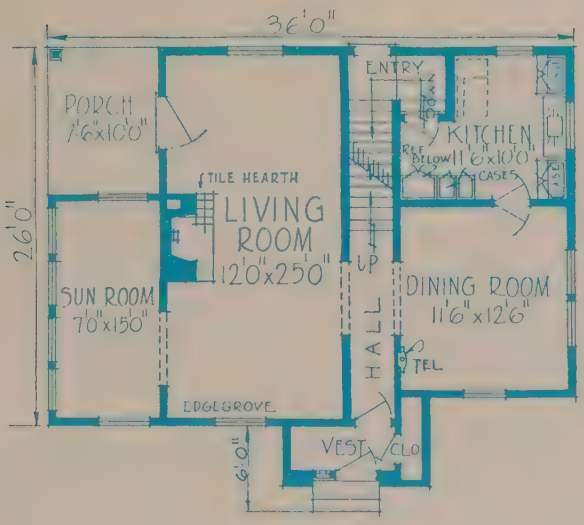
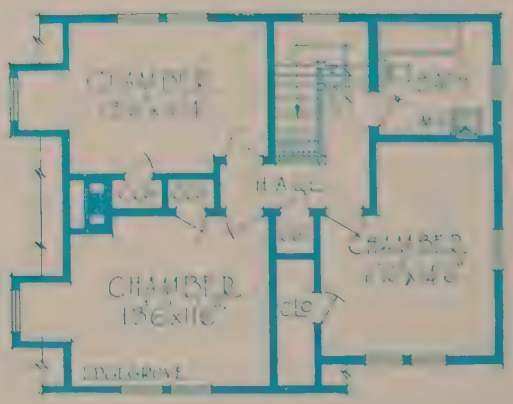
6 Rooms, Bath and Sun Room

The EDGEGROVE

IN THIS pleasing home of shingle construction there is rather an unusual but very convenient arrangement of rooms on both floors. The many built-in features insure much comfort and convenience. There are kitchen and phone cabinets, and plenty of closets.





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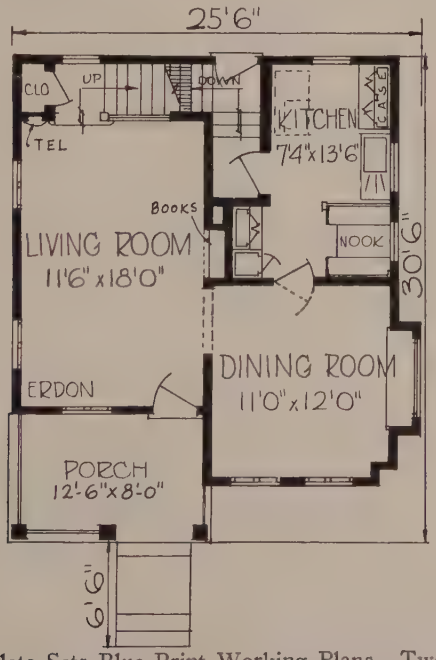
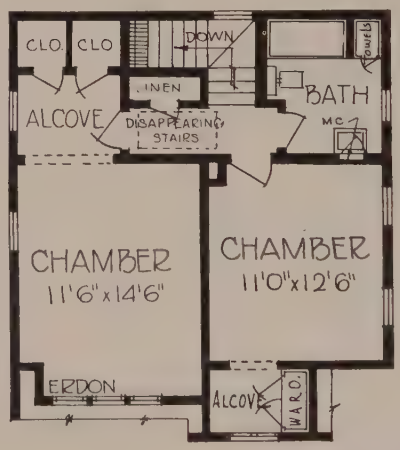
5 Rooms, Bath, Alcove and Nook

The ERDON

THIS home shows an attractive open porch, dormer and a front gable with half-timbered stucco. Inside arrangement shows a large living room with built-in book shelves, telephone cabinet, a kitchen with built-in nook and cabinets. Upstairs are two large chambers.





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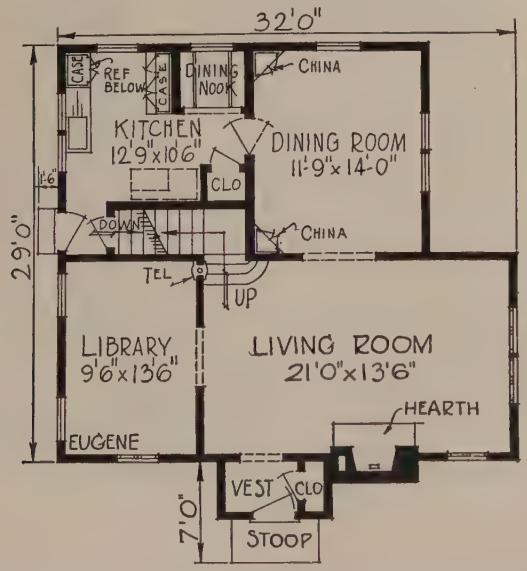
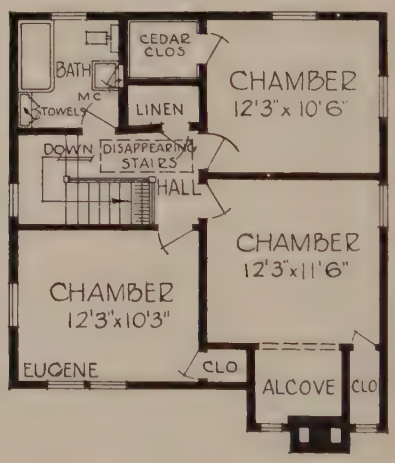
6 Rooms, Bath, Alcove, Library and Dining Nook

The EUGENE

A PLEASING home of shingles with stucco at entrance and brick for the imposing chimney. The first floor includes a large living room with fireplace, an adjoining library, a large dining room with built-in corner cabinets and an efficiency kitchen with dining nook and cabinets. Upstairs are three chambers, one alcove, a linen, cedar and other closets, a model bath with built-in towel cabinet and disappearing stairway to attic.





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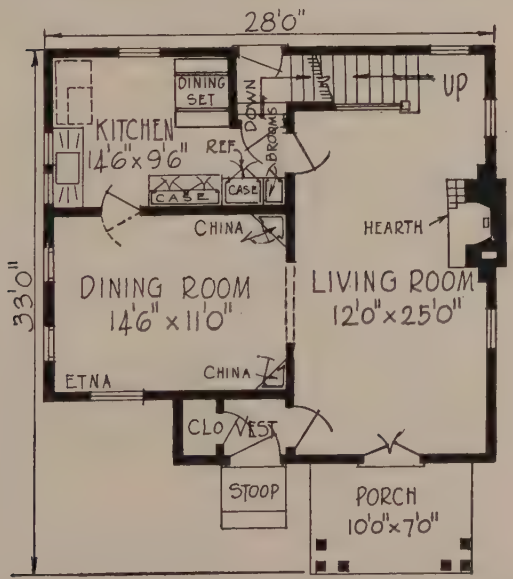
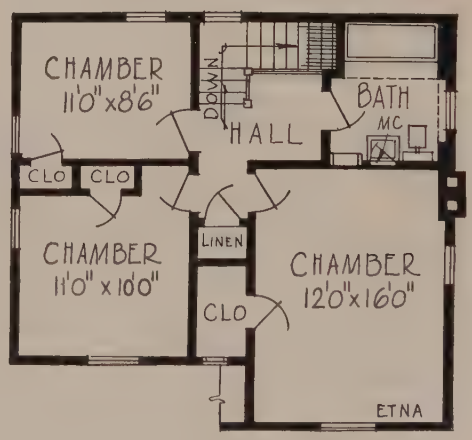
6 Rooms and Bath

The ETNA

THIS ATTRACTIVE home has a shingled roof and white siding walls with a brick chimney painted white to match. French doors connect the porch with a long living room which has an attractive fireplace. Convenient corner china cabinets in the dining room, kitchen cabinets and dining set are built-in. All rooms are provided with plenty of light.





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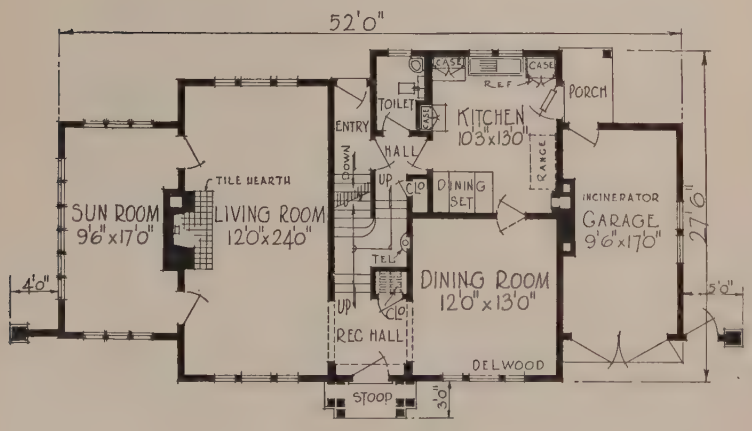
6 Rooms, Bath, Sun Room, Toilet and Garage

The DELWOOD

SURROUNDED by ample lawn, this magnificent example of pure American Colonial architecture, with its built-on garage, will show to best advantage. Both floors are particularly well planned and numerous conveniences, including a built-in dining set and an incinerator are included. Do not overlook the sun room nor the toilet on first floor.



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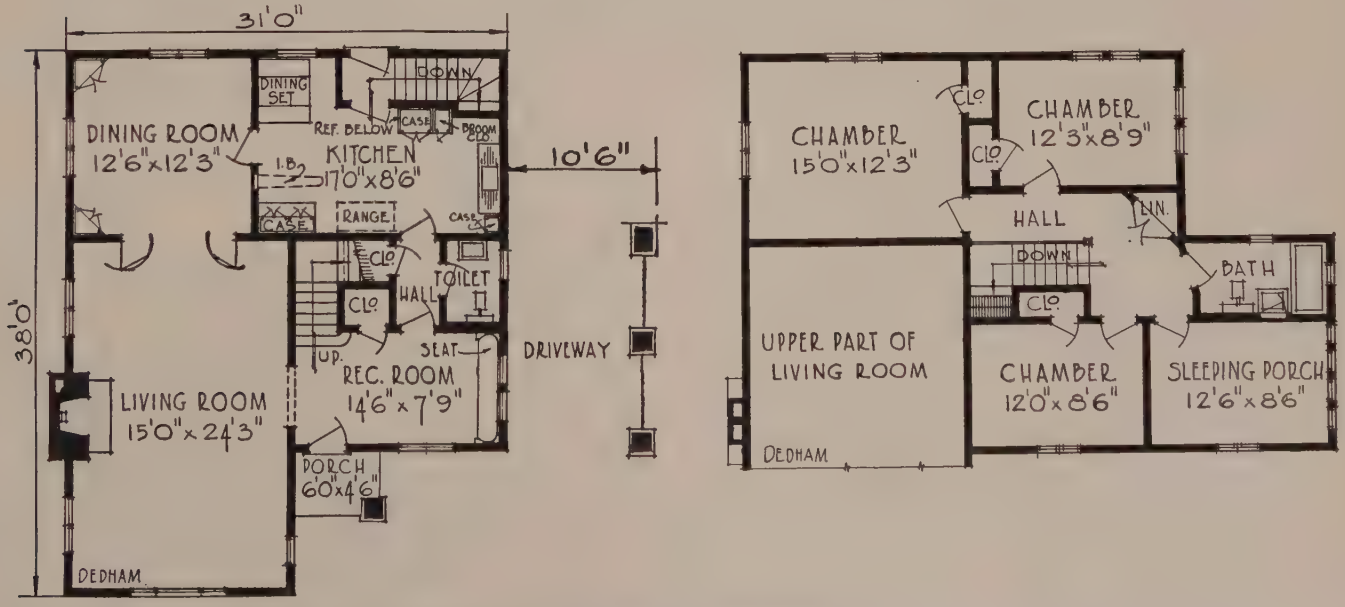
6 Rooms, Bath, Nook, Sleeping Porch and Toilet

The DEDHAM

An air of rusticity combined with beauty of color and harmonious lines makes the "Dedham" a unique and attractive home. A thatched roof is always fascinating and, when used with shingled side walls, is particularly effective. The floor plan shows excellent arrangement and many convenient features, including built-in dining set.



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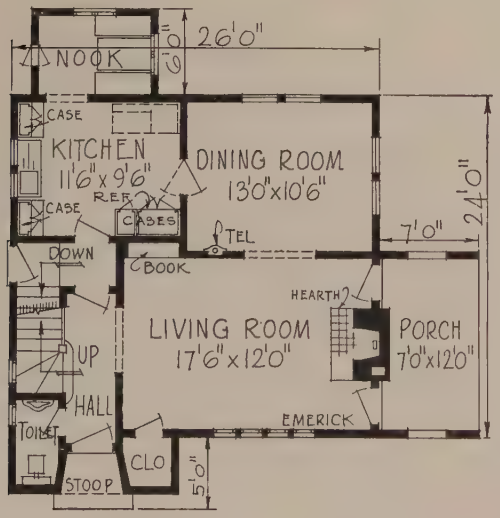
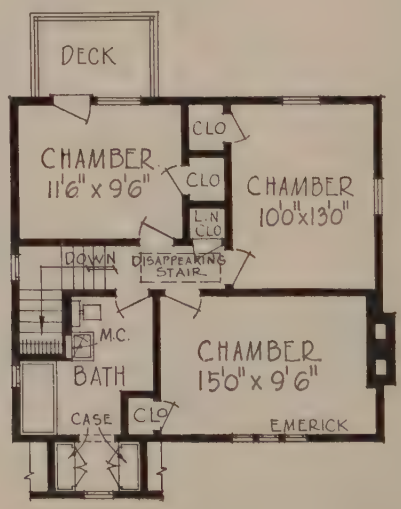
6 Rooms, Bath, Toilet and Dining Nook

The EMERICK

STUCCO, shingles, and half-timbers combine to make this handsome home. The effective entrance and leaded windows lend distinction to the front of the house. There's a fireplace and built-in book shelves in the living room, a kitchen equipped with cabinets, and a phone cabinet in the dining room as indicated on the first floor plan. On the second floor are located a disappearing stairway and three well planned chambers.





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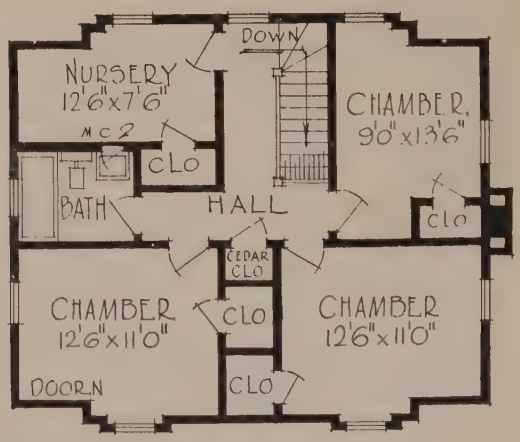
6 Rooms, Bath, Toilet and Sun Room

The DOORN

THIS picturesque Dutch Colonial offers much in exterior attractiveness and interior comfort. Note the splendid arrangement of rooms, the corner fireplace in living room, the model kitchen, the many built-in features, including a cedar-lined closet.



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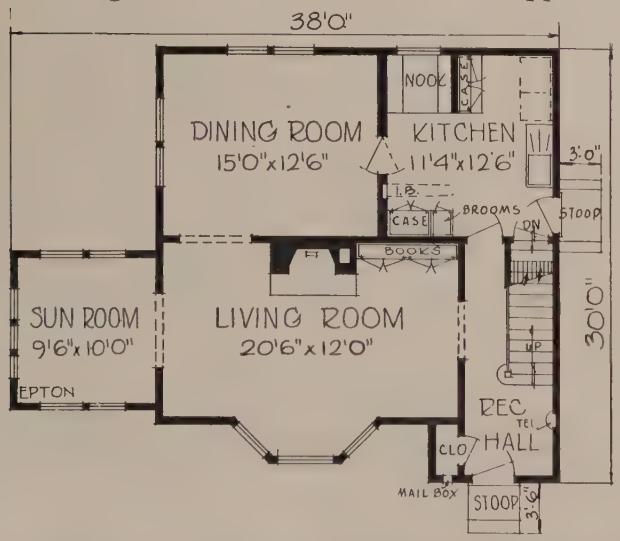
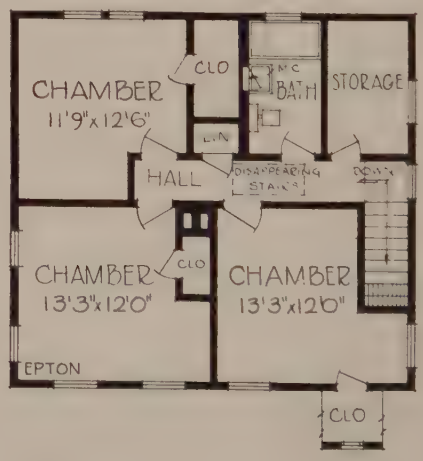
6 Rooms, Sun Room, Bath and Breakfast Nook

The EPTON

THE EFFECTIVE entrance of stucco harmonizes well with the walls of shingles. Note the bay window in living room, the sun room and the splendid interior arrangement. The large living room has fireplace and built-in book cases. The kitchen provides such built-in features as dining nook, broom and utility cabinets. Note the built-in mail box and phone cabinet. Upstairs there are three large chambers and a storage room, a bath room and large closets. A convenient disappearing stairway leads to the attic.





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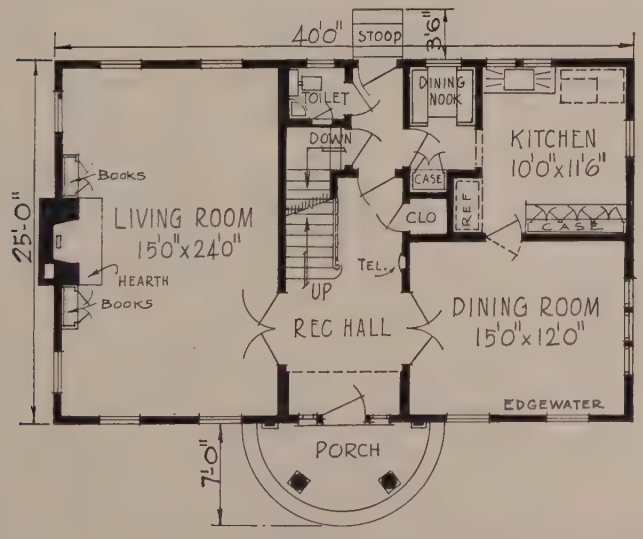
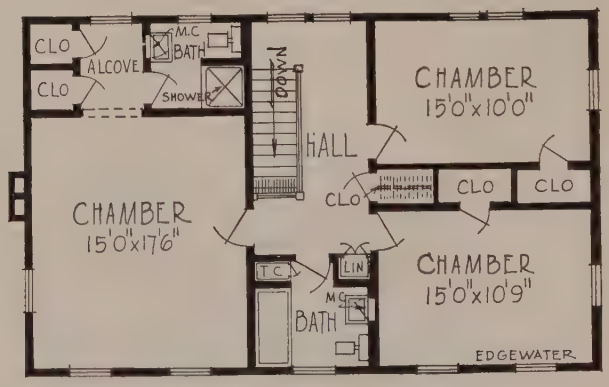
6 Rooms, Bath, Toilet and Dining Nook

The EDGEWATER

AN EXCEPTIONALLY well planned home. The exterior walls of white siding are capped by a plain shingled roof and decorated with dark window shutters. The entrance is well executed and very ornamental. Book shelves are built-in on either side of the living room fireplace. The kitchen is fully equipped and a telephone cabinet is built into the reception hall. Two bathrooms and an extra first floor toilet are provided.





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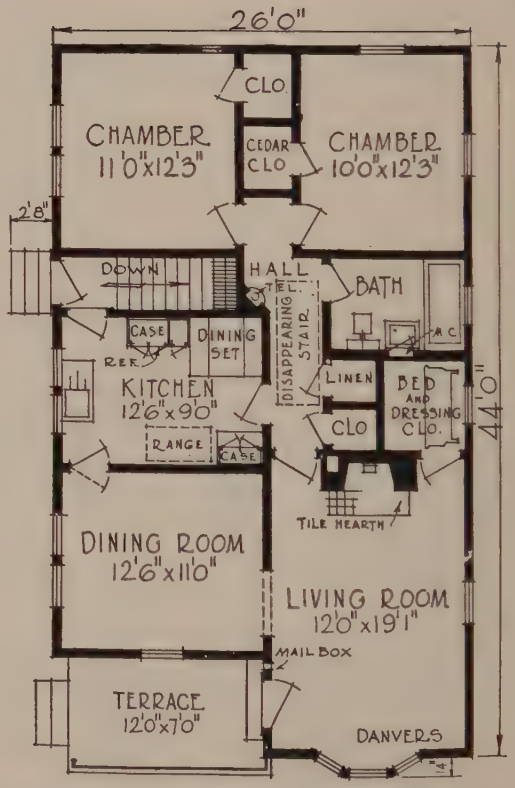
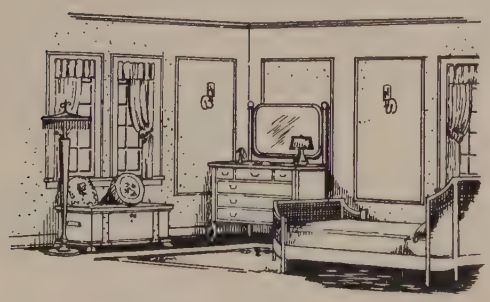
5 Rooms and Bath

The DANVERS

A VERY attractive bungalow of white siding, its terrace artistically enclosed with wrought iron railing. The inside arrangement is splendid—model kitchen, concealed bed, dining nook, phone nook, cedar lined closet, built-in mail box, and disappearing stairway to attic. Note the size of living and other rooms.





View In Rear Left Chamber

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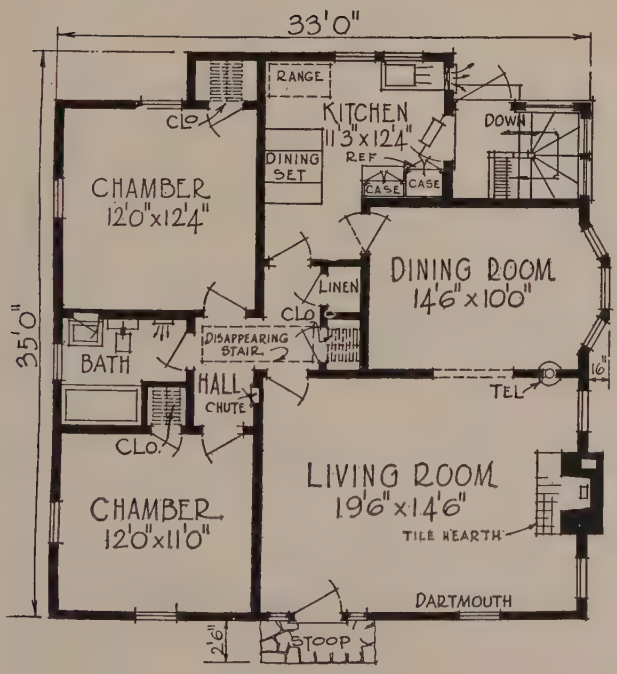
5 Rooms and Bath

The DARTMOUTH



THIS charming Cape Cod bungalow, artistic in every line and detail, is replete with the many modern conveniences, such as model kitchen, built-in dining set, delivery receptacle in back door, disappearing stairway to attic and other numerous built-in millwork features.

Interior View of Rear Chamber

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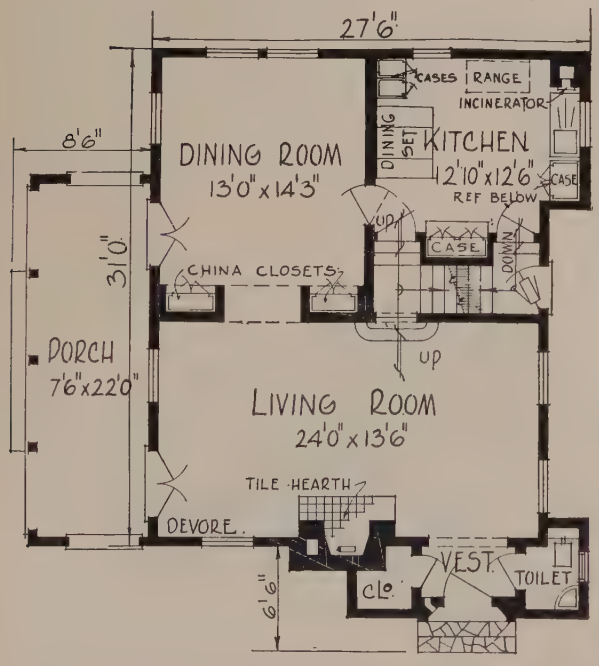
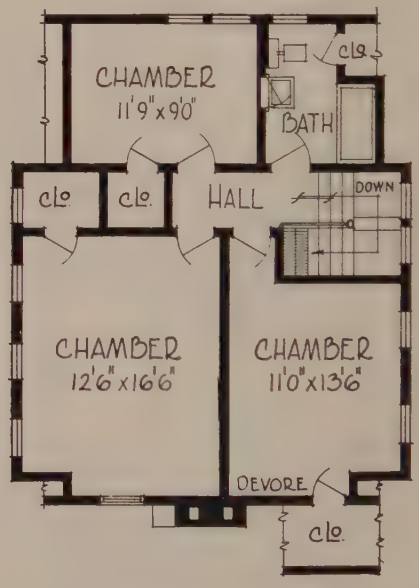
6 Rooms, Bath and Toilet

The DEVORE

A RATHER unusual and very attractive treatment of the modern Colonial style. The ornamental fencing adds much to general appearance and assures strict privacy.





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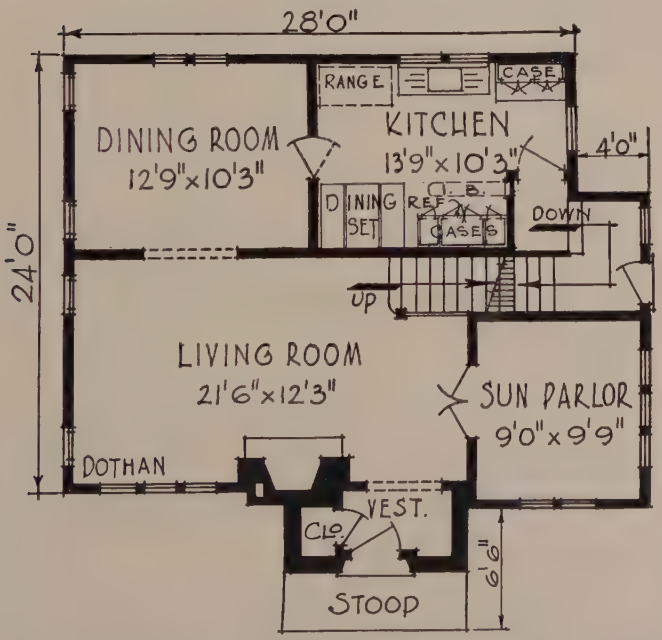
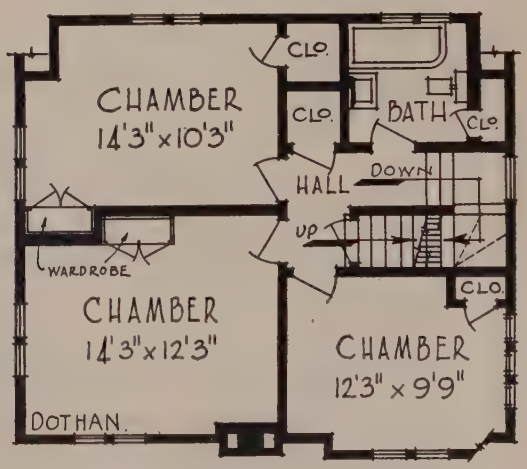
6 Rooms, Bath and Sun Parlor

The DOTHAN

THE exterior of the "Dothan" makes a pleasing picture of the comfort to be found within. The large living room, with adjoining sunroom, is an ideal arrangement for comfortable living, and every detail is arranged for the utmost convenience.





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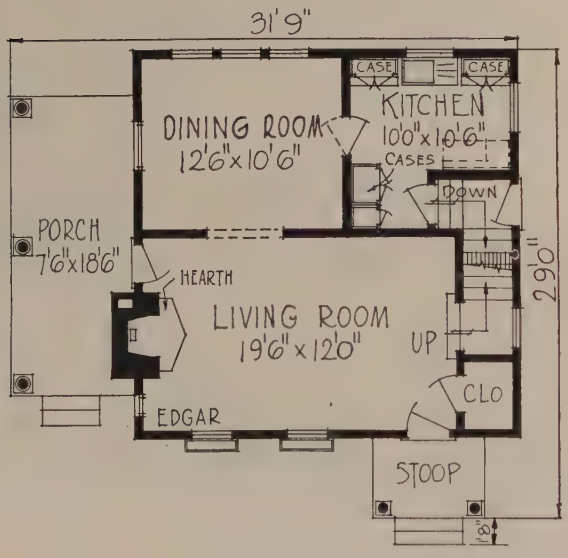
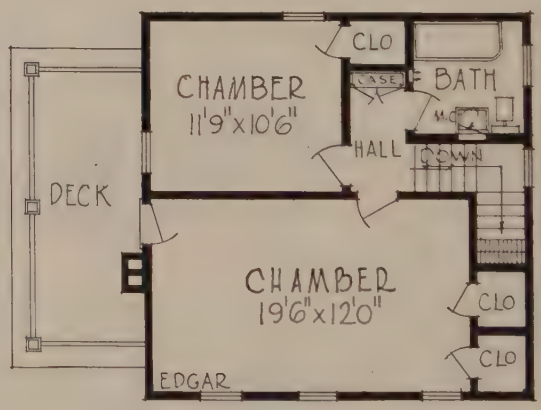
5 Rooms and Bath

The EDGAR

HERE are five rooms of convenience and comfort enclosed in an attractive exterior of white siding. There is a large open porch at the left of the living room. There is an efficiency kitchen with built-in cabinets. Second floor provides two large chambers, a built-in case in hall, a bath and three closets. Note the convenient airing deck.





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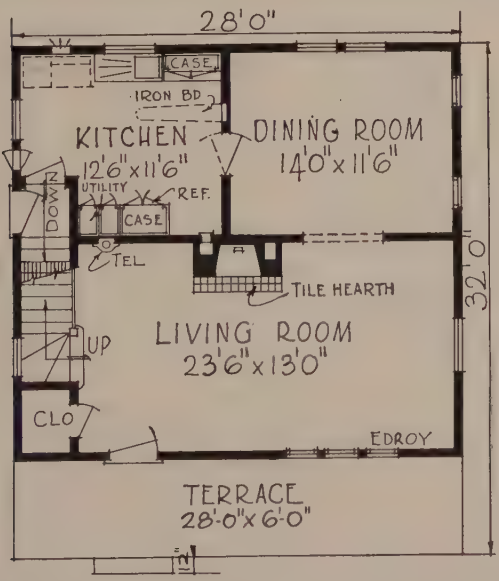
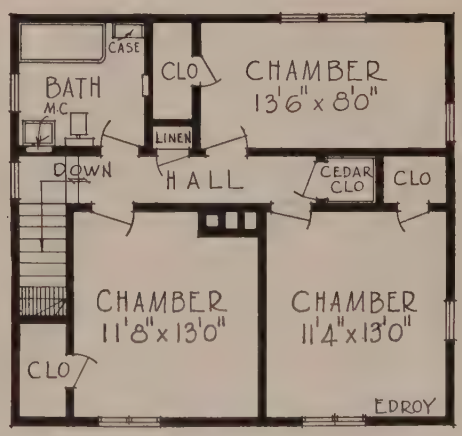
6 Rooms and Bath

The EDROY

THIS home has distinction and individuality. The plain roof line has been effectively broken up by the second floor windows while the entrance and living room windows harmonize with the plain shingle walls. A telephone cabinet has been built into the wall to the left of the living room fireplace. Ironing board and cabinets are built into the kitchen. A linen closet and cedar lined storage closet are included in the second floor plans.





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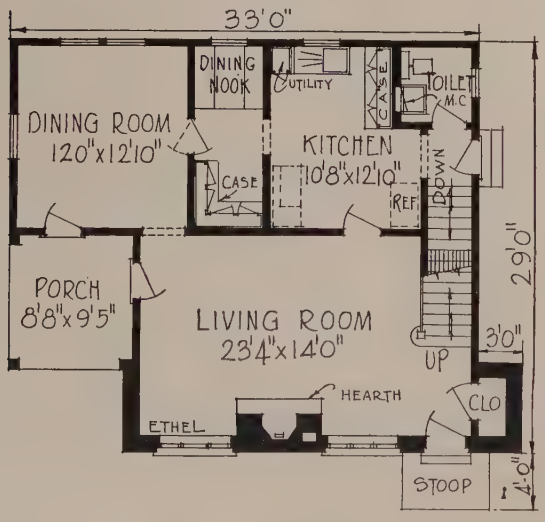
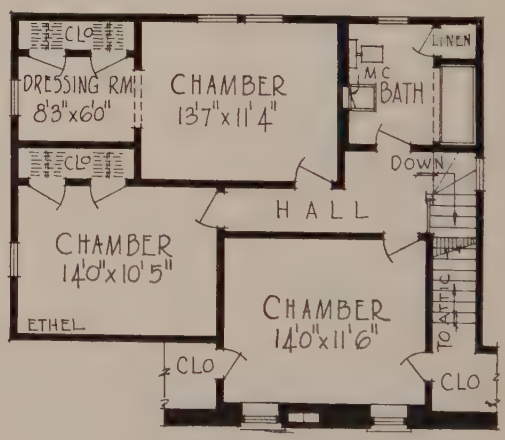
6 Rooms, Bath, Toilet, Dining Nook and Dressing Room

The ETHEL

COMMON BRICK painted white is effectively used on the front gable of this interesting home. White siding is used for the other exterior walls. A friendly fireplace in the living room, a kitchen equipped with many built-in units, and a first floor toilet are provided for. Note the dressing room, large closets and convenient chamber arrangement.





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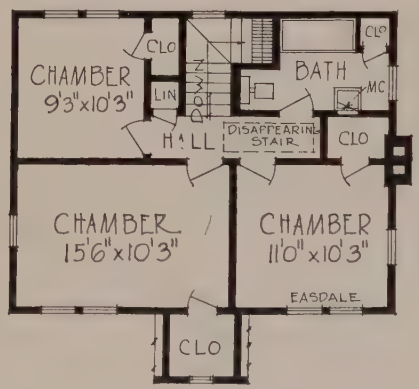
6 Rooms, Bath and Sun Room

The EASDALE

THIS attractive home demonstrates the possibility of shingles for exterior walls. Note the comfortable open porch off living room, the large living room with fireplace and the stairway leading to floor above. There is an adjoining sun room, an efficiency kitchen with built-in cabinets. Upstairs are three chambers, a bathroom with closet, and each bedroom has its own clothes closet. A disappearing stairway gives easy access to the attic.



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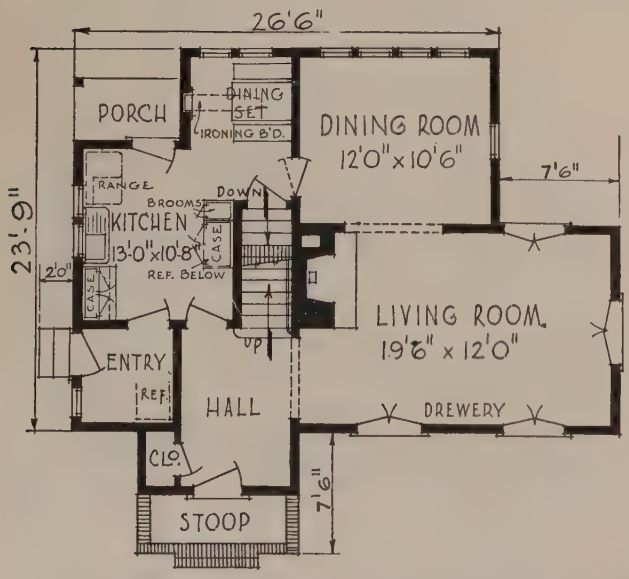
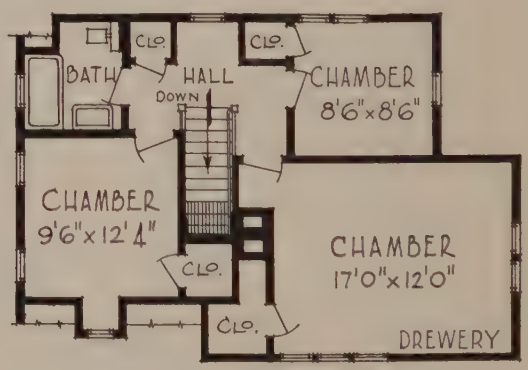
6 Rooms, Bath and Nook

The DREWERY

LIGHT shingles with contrasting dark trim produce a delightful effect. There is a charmingly inviting entrance, and an interior arrangement that leaves nothing undone that could detract from convenience and comfort. Note the built-in features.





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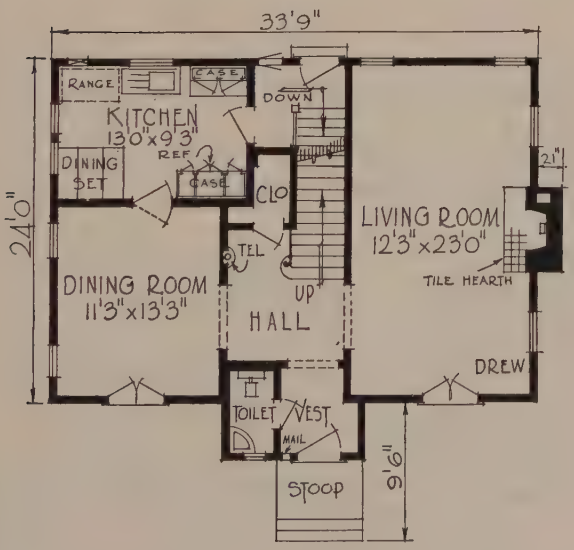
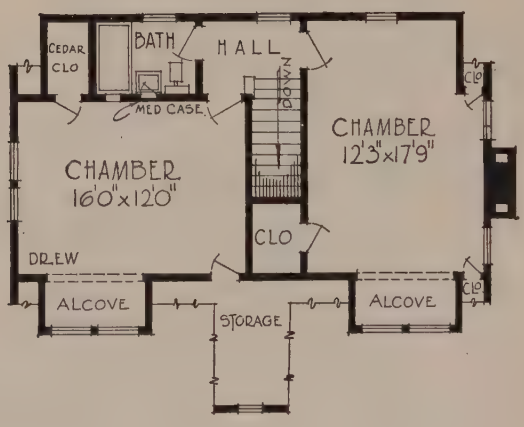
5 Rooms, Bath and Toilet

The DREW

HERE is a home that is unusual both inside and out. Roof is asbestos shingles in rich colorings. There is a cedar lined closet on the second floor, a toilet on first floor and many built-in features. Note splendid arrangement of chambers in second floor plan.





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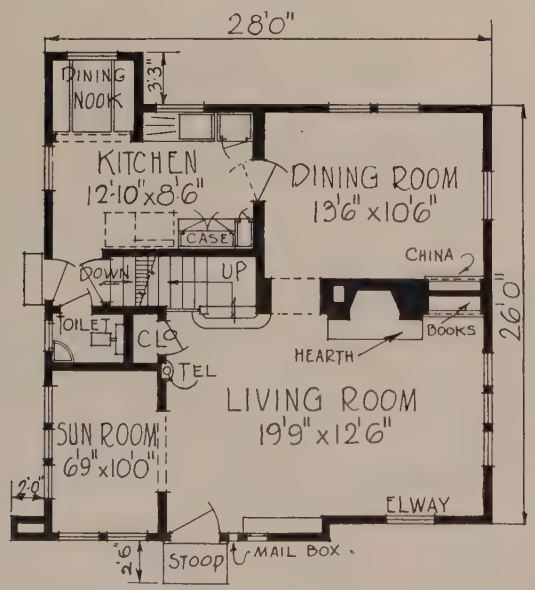
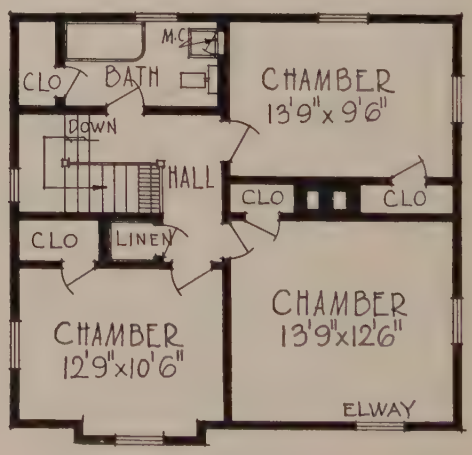
6 Rooms, Bath, Dining Nook and Sun Room

The ELWAY

THE ATTRACTIVE gable of stucco at entrance is pleasingly combined with the shingled exterior. Notice the ornamental window with grille work above entrance, the large living room with fireplace, built-in book cases, phone cabinet and built-in mail box. There is an attractive sun room off living room; a splendid kitchen with built-on breakfast nook, and three large chambers upstairs with bathroom, linen closet and other closets.





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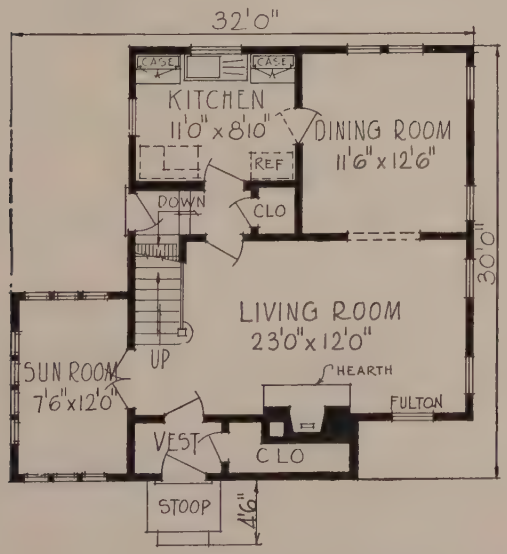
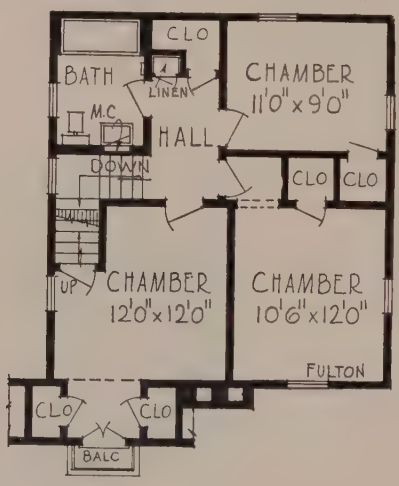
6 Rooms, Bath and Sun Room

The FULTON

THE stuccoed entrance wall stands out effectively against the dark shingled walls. The entrance door with the balcony above and the brick chimney with the iron ornament are distinctive. The interior arrangement is pleasing and many built-in features are provided for the kitchen. A fireplace helps make the cheerful living room more homelike.





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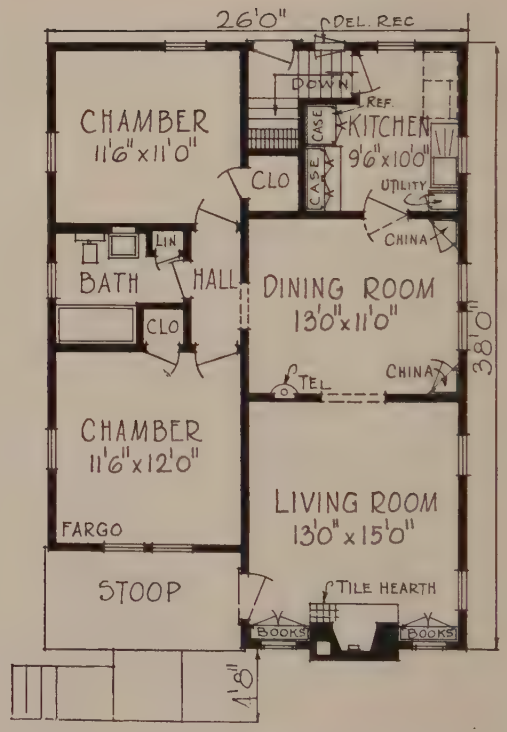
5 Rooms and Bath

The FARGO

HERE is a compact home of five rooms with an imposing chimney of brick and an inviting entrance. Living room has a fireplace and built-in book cabinets. Dining room has corner cabinets and a built-in telephone cabinet. Kitchen has built-in cases and delivery receptacle at rear. There are two large chambers, a bathroom, two large closets and a linen closet.



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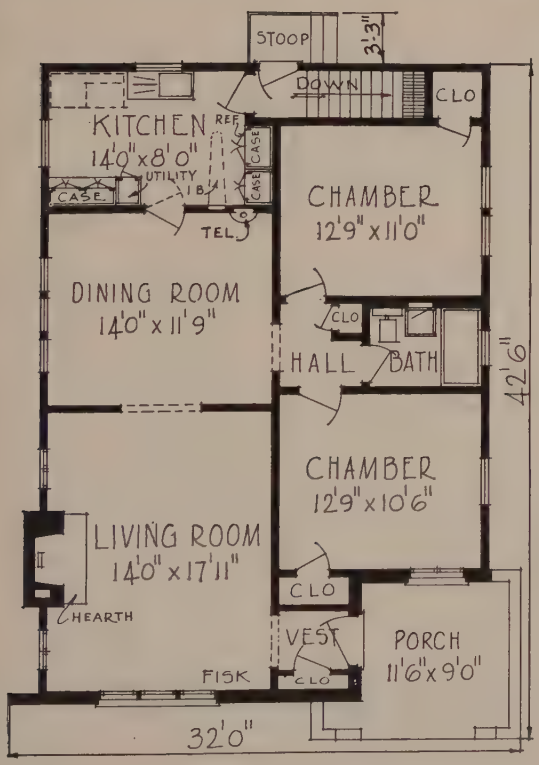
5 Rooms and Bath



The FISK

FACE BRICK for the front and shingle for the side walls, a variegated shingle roof, forms the attractive exterior of this home. Note the attractive living room windows, the half-timbered, stucco gable above the inviting entrance. See the splendidly planned interior, the well arranged kitchen with its built-in cabinets and cases. Note the ample closet space, the built-in phone cabinet in dining room, the large cloak closet in vestibule.

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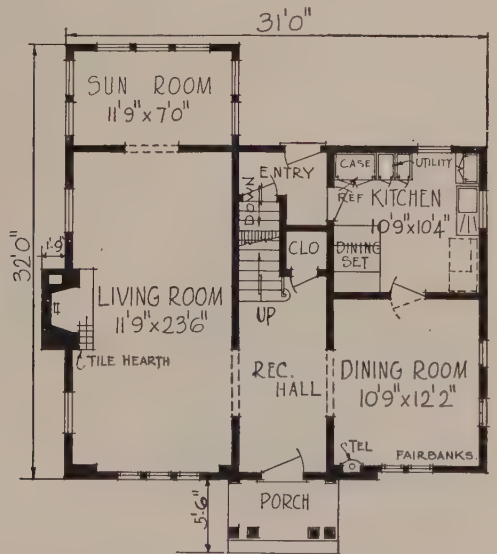
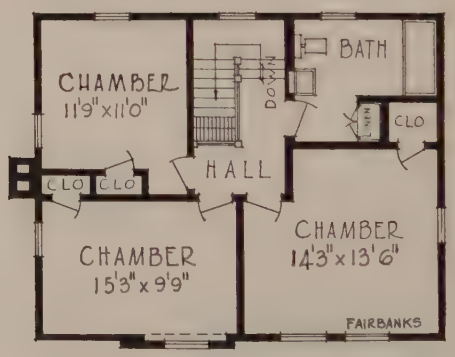
6 Rooms, Bath and Sun Room

The FAIRBANKS

A HOME of simple lines. Shingled walls are brightened by a good use of stucco and half timber at the gable and white trim at the windows. The brick chimney at the side serves a fireplace in the living room. A telephone cabinet is built into the dining room and the kitchen is provided with built-in dining set and cabinets. Rooms are light, cheerful and well arranged. This home will be a pleasing addition to any locality.





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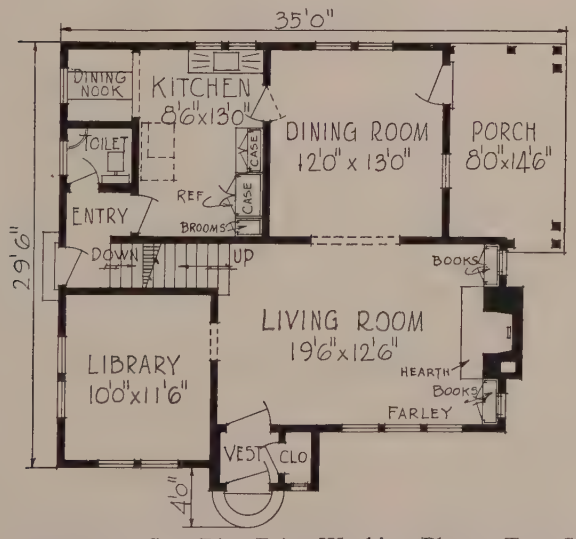
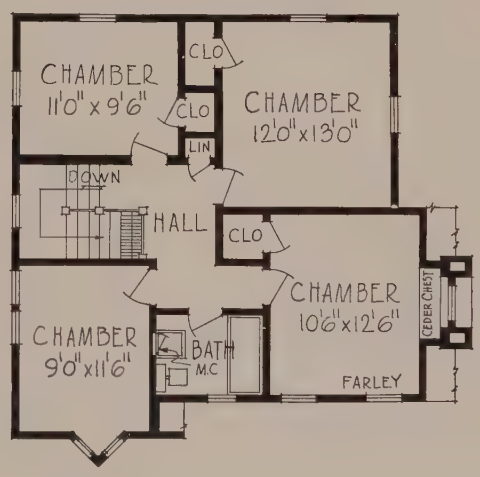
8 Rooms, Bath and Dining Nook

The FARLEY

STUCCO and half-timbers form an interesting pattern against the shingled walls of this home. The brick chimney and the entrance with its individual roof are odd both in design and treatment. The living room has a natural fireplace with built-in bookcases on either side. Built-in kitchen conveniences, built-in cedar chest as well as dining nook and toilet on first floor are useful features of this well arranged interior.





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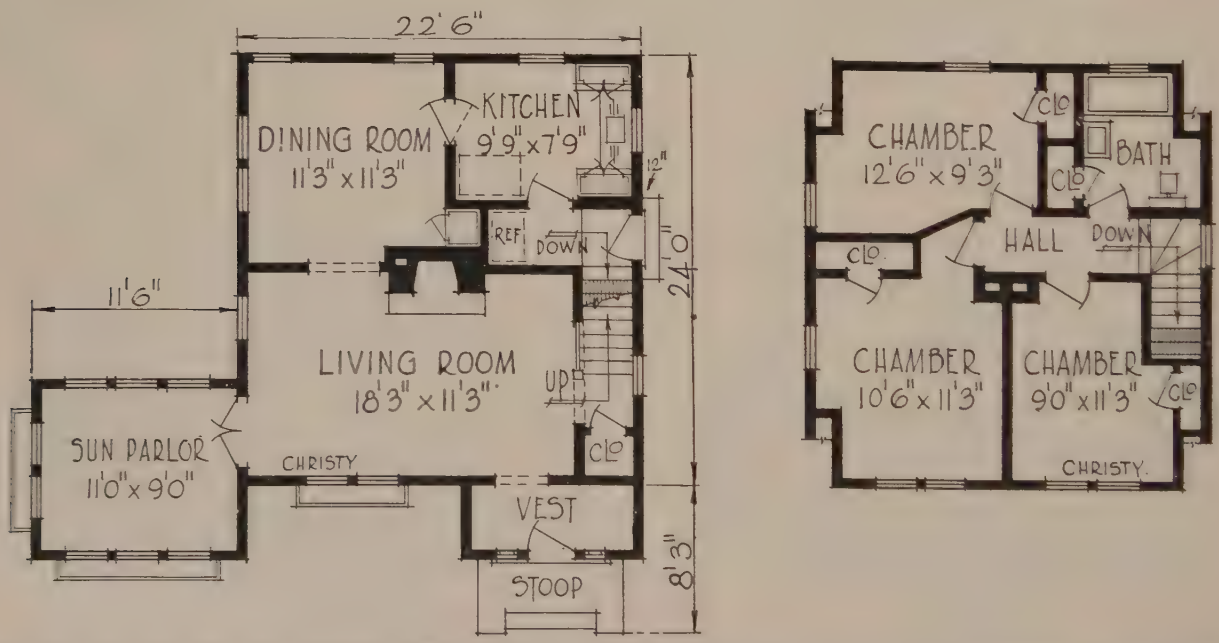
6 Rooms, Bath and Sun Parlor

The CHRISTY

PICTURESQUE perhaps describes this charming home better than any other word. There is grace and beauty in every line, in every detail. And, inside, nothing has been overlooked for comfortable convenience. Note the size of the well arranged rooms.



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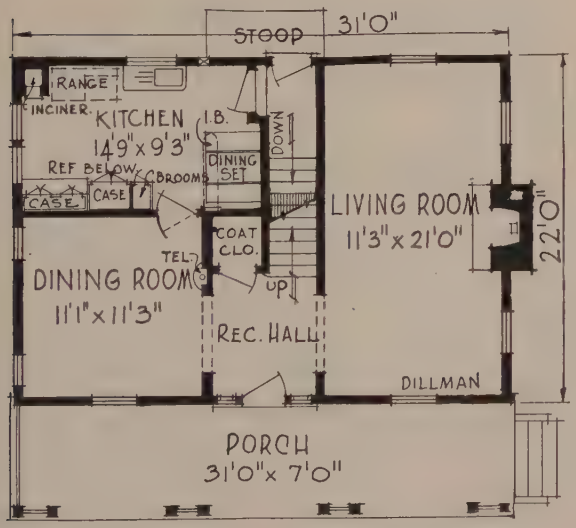
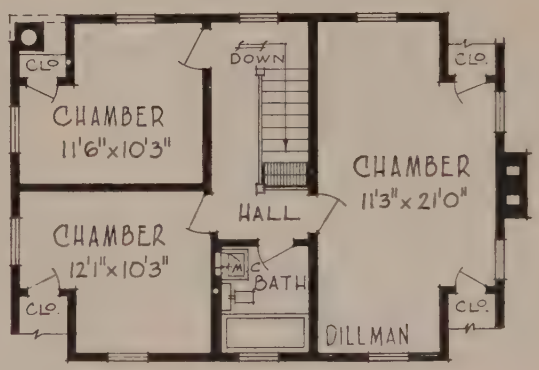
6 Rooms and Bath

The DILLMAN

THE "Dillman" is such a picturesque home that it looks like it has been lifted out of some old New York Colony. It is a home of unusual convenience and rooms are of good size and include the many built-in conveniences. Plenty of sunlight is provided.





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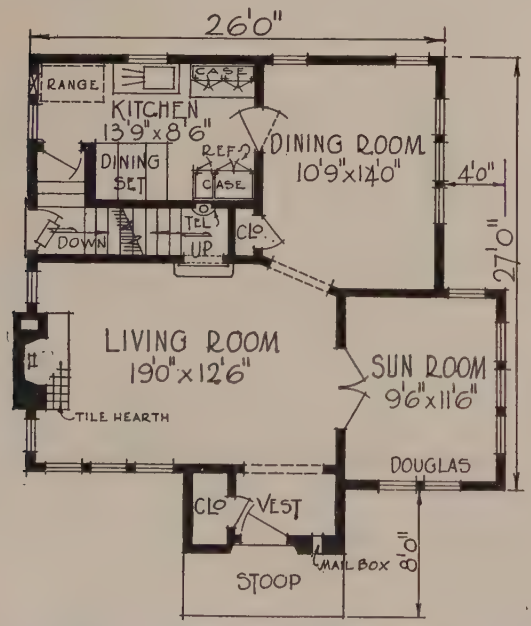
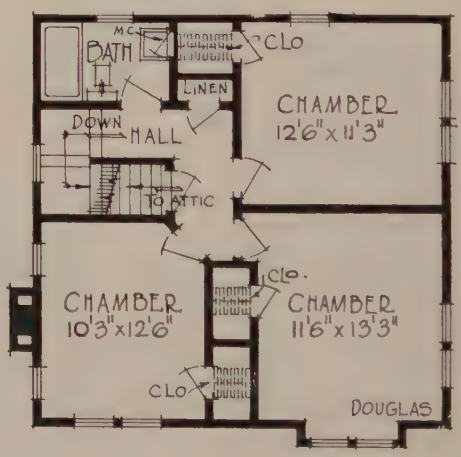
6 Rooms, Bath and Sun Room

The DOUGLAS

THE English country homes inspired the splendid design of the "Douglas," with its shingled walls and asbestos roof. Both floors are ideally planned and there is a model kitchen, built-in dining set, phone cabinet, mail box, adjustable closet fixtures, and delivery receptacle in rear door. Healthful sunrooms are always appreciated.





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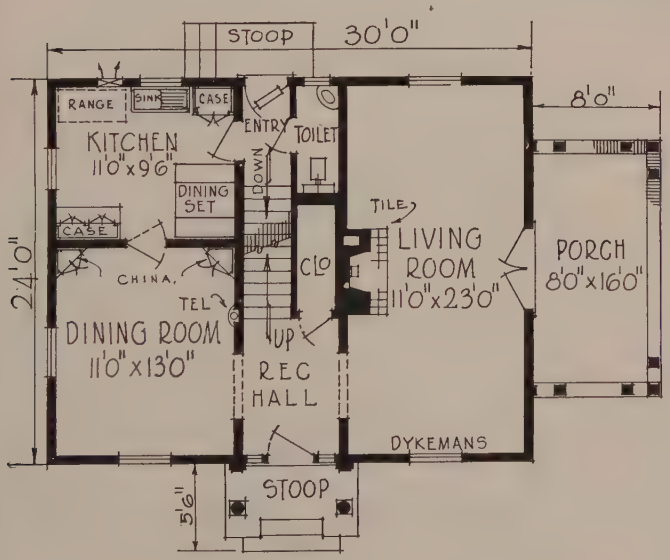
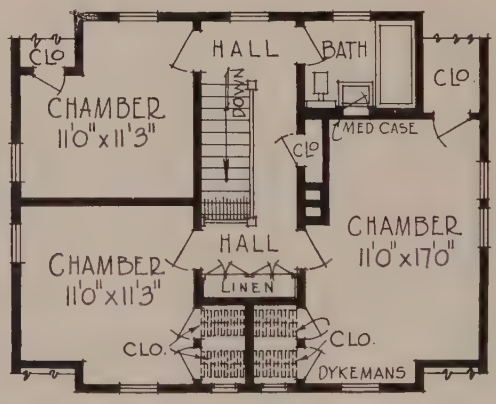
6 Rooms and Bath

The DYKEMANS

A SMALL, but splendidly proportioned Dutch Colonial, with attractive entrance and dormers. Inside, there is an efficiency kitchen, with many built-in features including a delivery receptacle in back door. There is a large living room with cozy fireplace.





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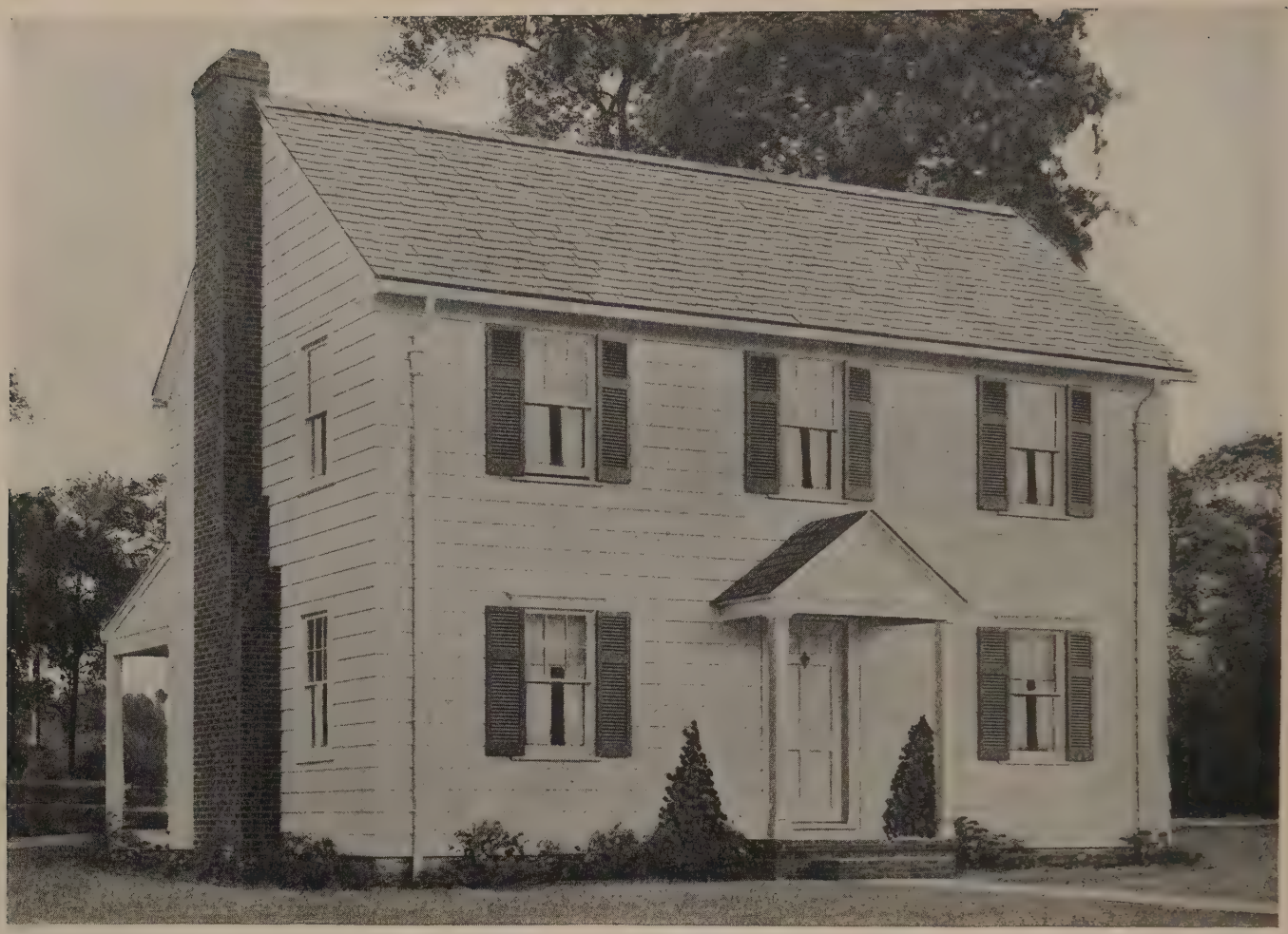
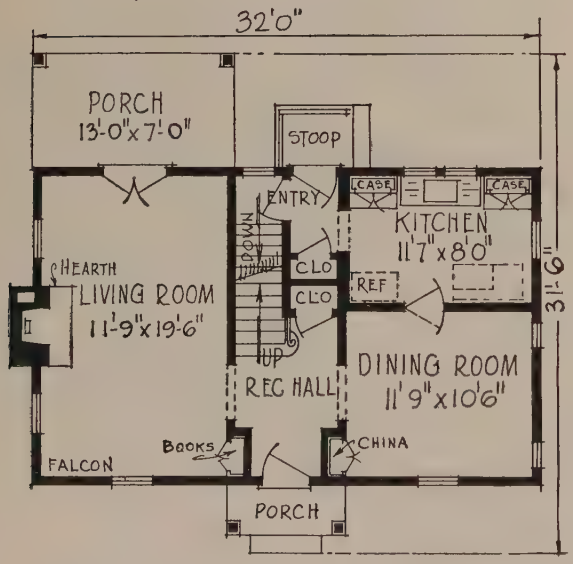
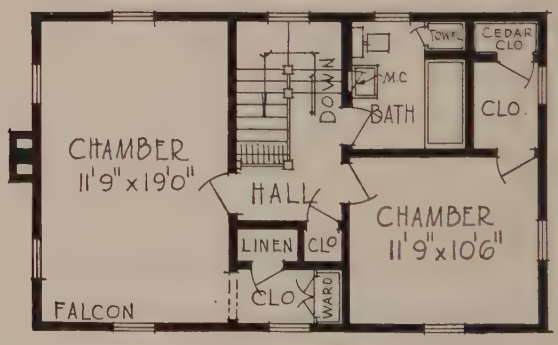


5 Rooms and Bath

The FALCON

THE QUIET lines of this simply designed Colonial home are charming. The characterful entrance, dark shutters, and brick chimney, both decorative and useful, and the porch at the rear may be used for an outdoor sitting room. The large living room has a fireplace and built-in book shelves. A china cabinet in the dining room, convenient kitchen units, and a wardrobe and cedar lined closet on the second floor are built-in.





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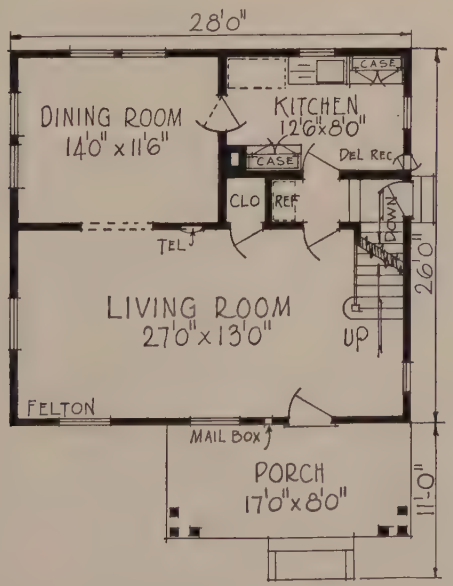
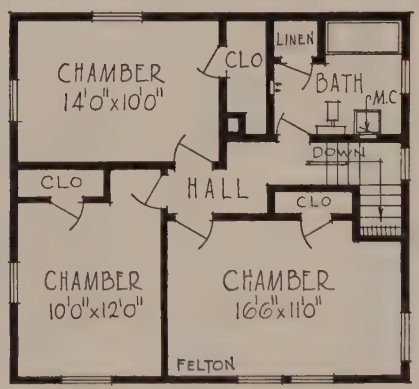
6 Rooms and Bath

The FELTON

THERE is much comfort and convenience in this compact little home. There are two well arranged floors, a comfortable open porch and conveniently planned kitchen. Built-in features include kitchen cabinets, delivery receptacle in rear door, telephone cabinet, mail box, etc. Note the large living room, the chambers and ample closet space.





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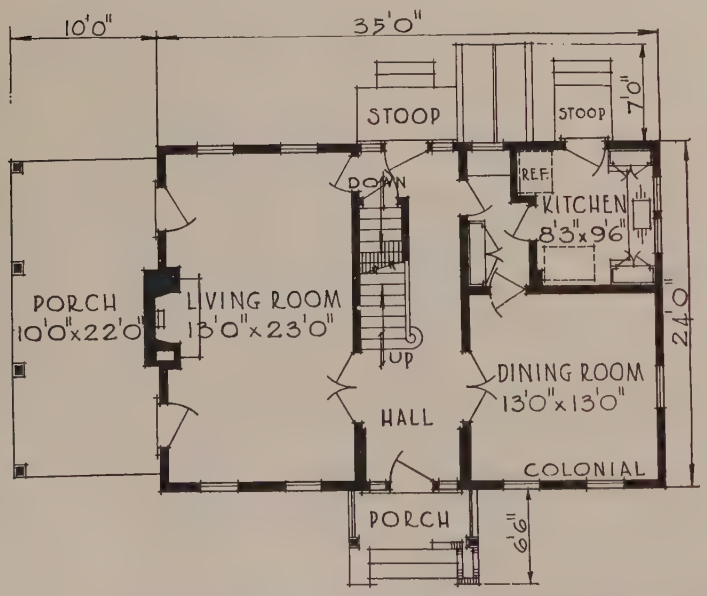
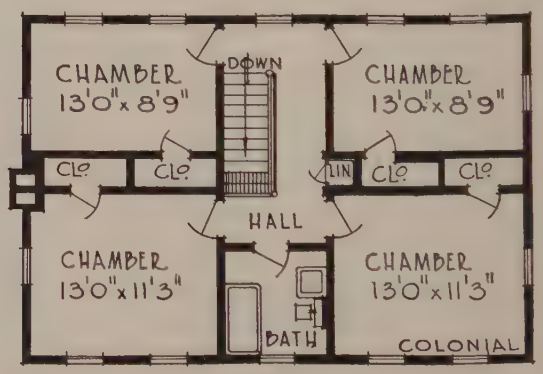
7 Rooms and Bath

The COLONIAL

A WELL windowed home is a bright, cheerful home. The green of the shutters against the white siding of exterior is peacefully pleasing. Inside, the arrangement is particularly good—assuring every convenience and much comfort. Rooms are commodious.





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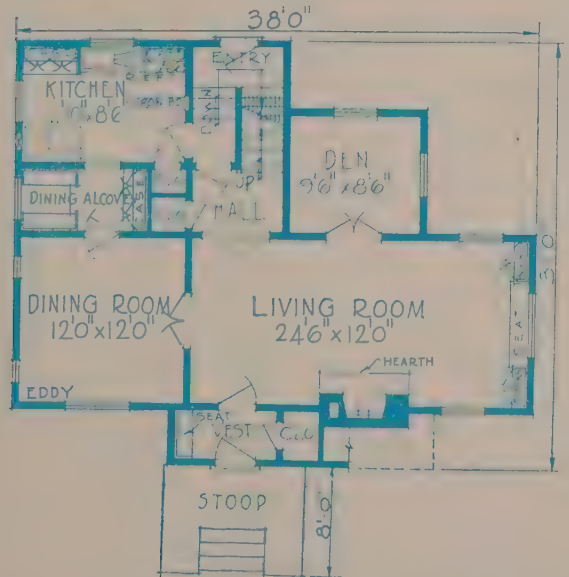
5 Rooms, Bath, Dining Alcove and Den

The EDDY

SKILLFUL handling of roof lines with an unusual chimney design make this a distinctive home. The dark toned shingled walls are in keeping with the general architectural treatment. Built-in bookcases, window seat and fireplace in the living room. A dining alcove between kitchen and dining room. There are plenty of built-in conveniences.



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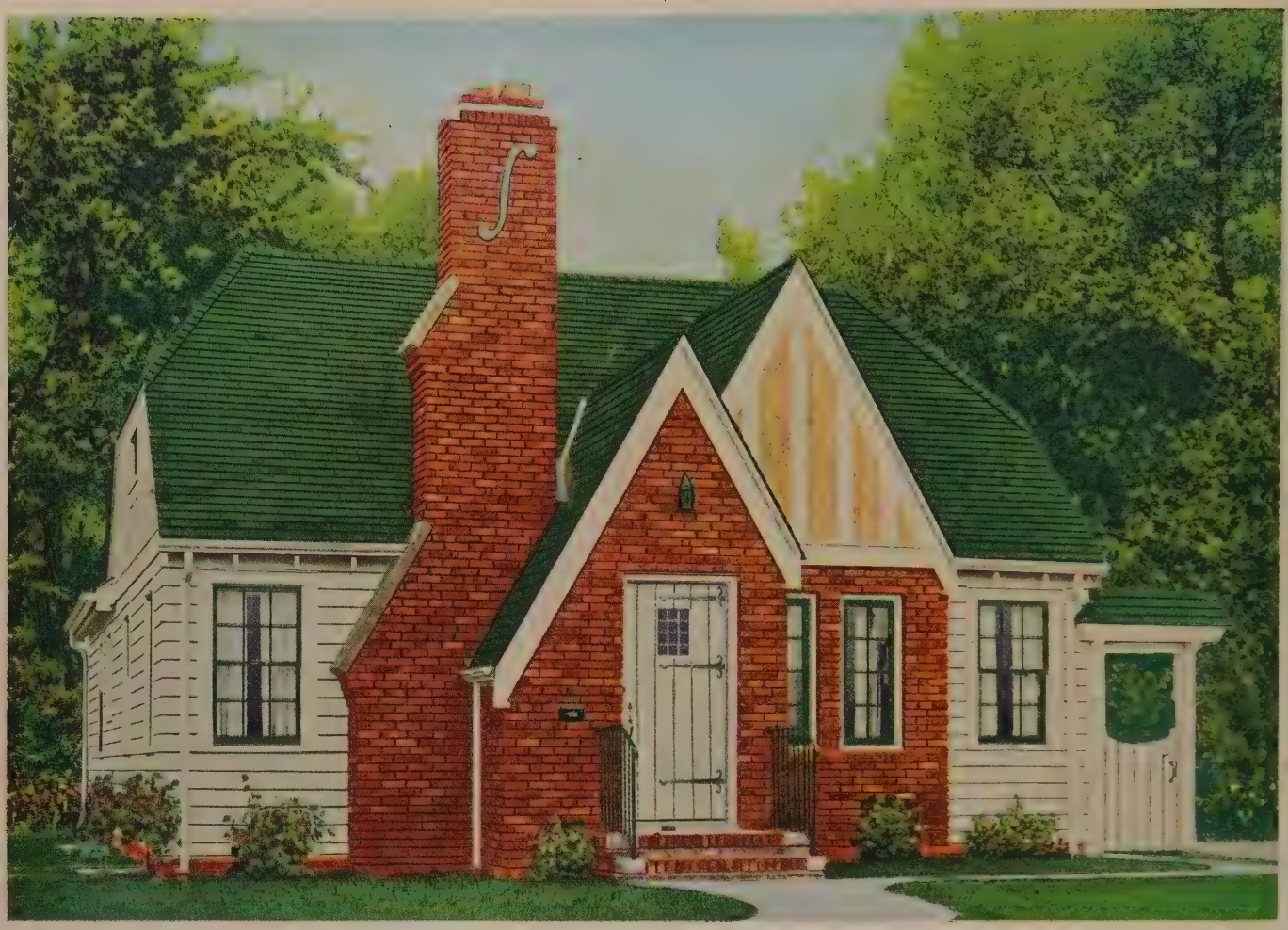
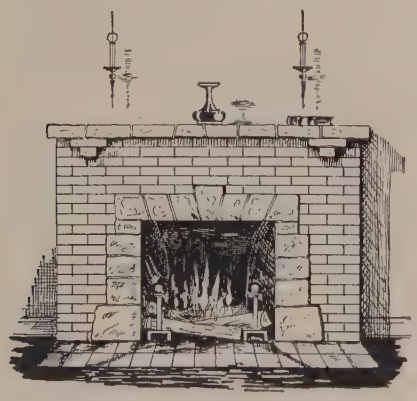


5 Rooms and Bath

The EASTLAKE

HERE is brick, wood and stucco used in pleasing combination. Note the striking lines of chimney, the artistic gate. See how carefully the interior is planned. The comfortable size of rooms. This is a home worthy of consideration as it promises much in cheerful living comfort.



Living room fireplace of brick and stone.

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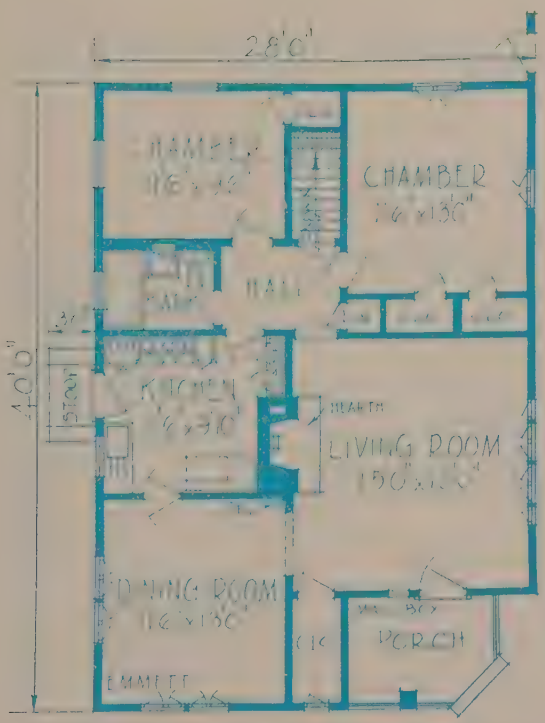
5 Rooms and Bath

The EMMETT



SHINGLED walls with odd shaped window and door openings blend well with the quaint roof lines of this home, as do the awnings, porch railings and ornamental balcony at the small window in the front gable. A natural fireplace in the living room, and many built-in kitchen conveniences, telephone cabinet and mail box add materially to the comforts of this home.

The fireplace is the natural social center of the home.

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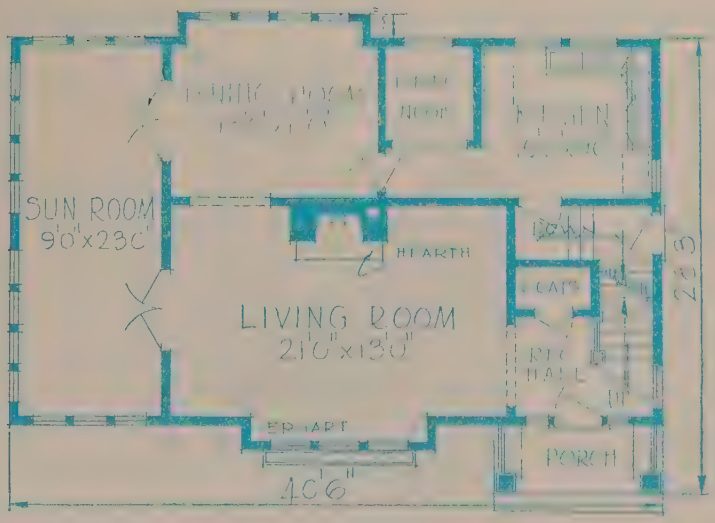
6 Rooms, Bath, Dining Nook and Sun Room

The ERHART

BROWN shingled roof in pleasing contrast with white siding walls. Lines of the gambrel roof are interestingly broken by the dormers, sun room and entrance. Note the fireplace, dining nook, linen and hall closets, and built-in conveniences. The living room, dining room and sun porch arrangements are particularly well planned.



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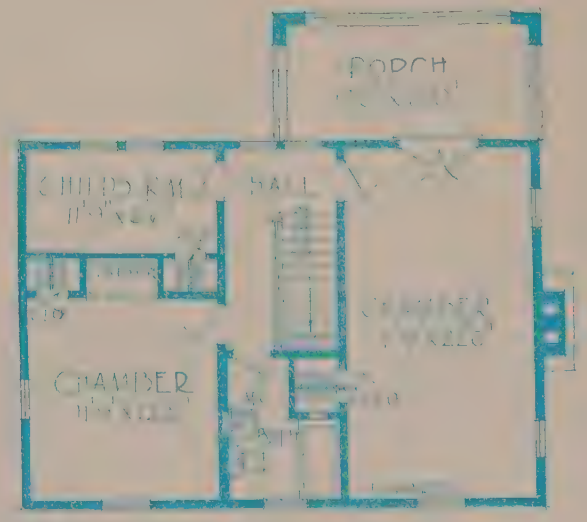
6 Rooms and Bath

The EDWARDS

SHINGLED walls, with an imposing chimney, and the symmetrical treatment of the entrance and window groups combine to make this handsome colonial home. The living room with massive fireplace opens onto a good sized porch at the rear.



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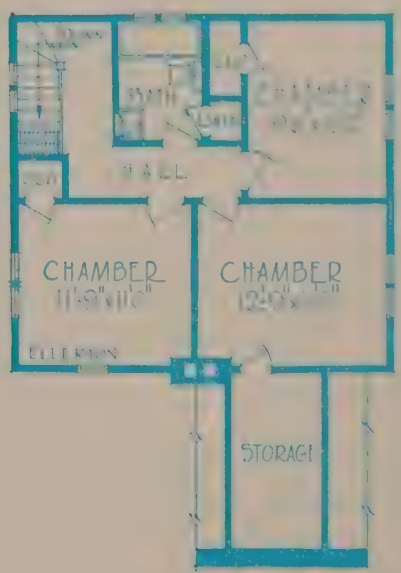
6 Rooms, Bath, Storage and Sun Room

The ELLERTON

HERE is an unusually charming home of stone with shingled dormers and impressive chimney. There is a large living room and both floors are carefully planned.



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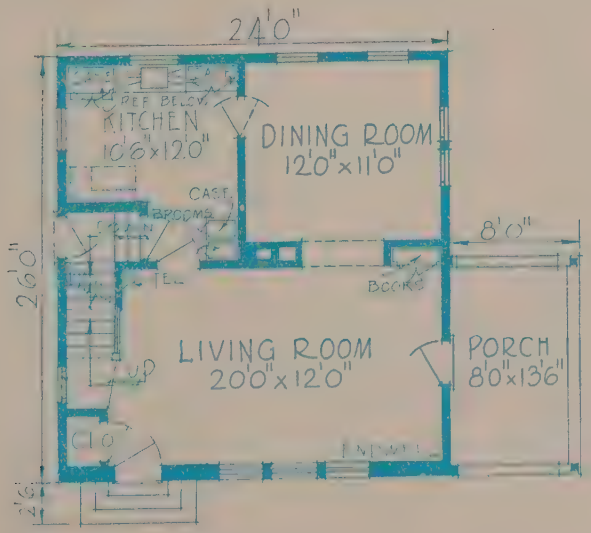
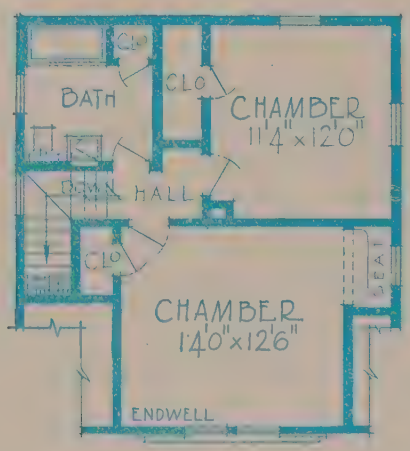
5 Rooms and Bath

The ENDWELL

A STRIKING combination of brick laid herring-bone fashion, with half-timbered decorations for first story and siding for upper portion. The conveniently arranged interior provides for a large living room, a model kitchen and dining room. Upstairs there are two large chambers, a bath and ample closet space. Note built-in seat in front room.





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6 Rooms, Bath, Toilet, Dining Alcove and Sun Room

The ELMWOOD

WHITE siding, stucco and half timbers are used for walls. Roof is covered with wood shingles. The use of iron hardware for the night lamp, door decorations and stoop railings, together with arched gateway and second floor bedroom window are appropriate and interesting touches. The living room contains a natural fireplace and a window seat flanked by built-in bookshelves. Other desirable built-in features include kitchen cases, telephone cabinets on both floors, mail box and bedroom wardrobe.

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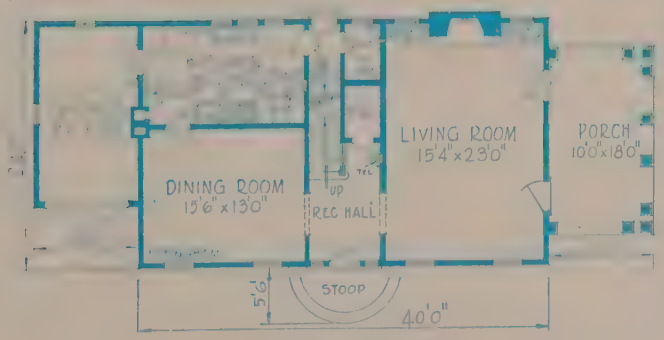
6 Rooms, Bath, Toilet and Garage

The EFFINGHAM

IN THIS attractive home of shingle construction there is rather an unusual but pleasing handling of the dormer of second floor. A splendid balance is achieved through the placing of an inviting open porch at one end and a built-on garage at the other. All rooms are very cheerful and bright because the depth of the house is but little more than half its width. The plans show a remarkably convenient arrangement of rooms and the careful selection of numerous built-in features, including dining set, cabinets, etc.



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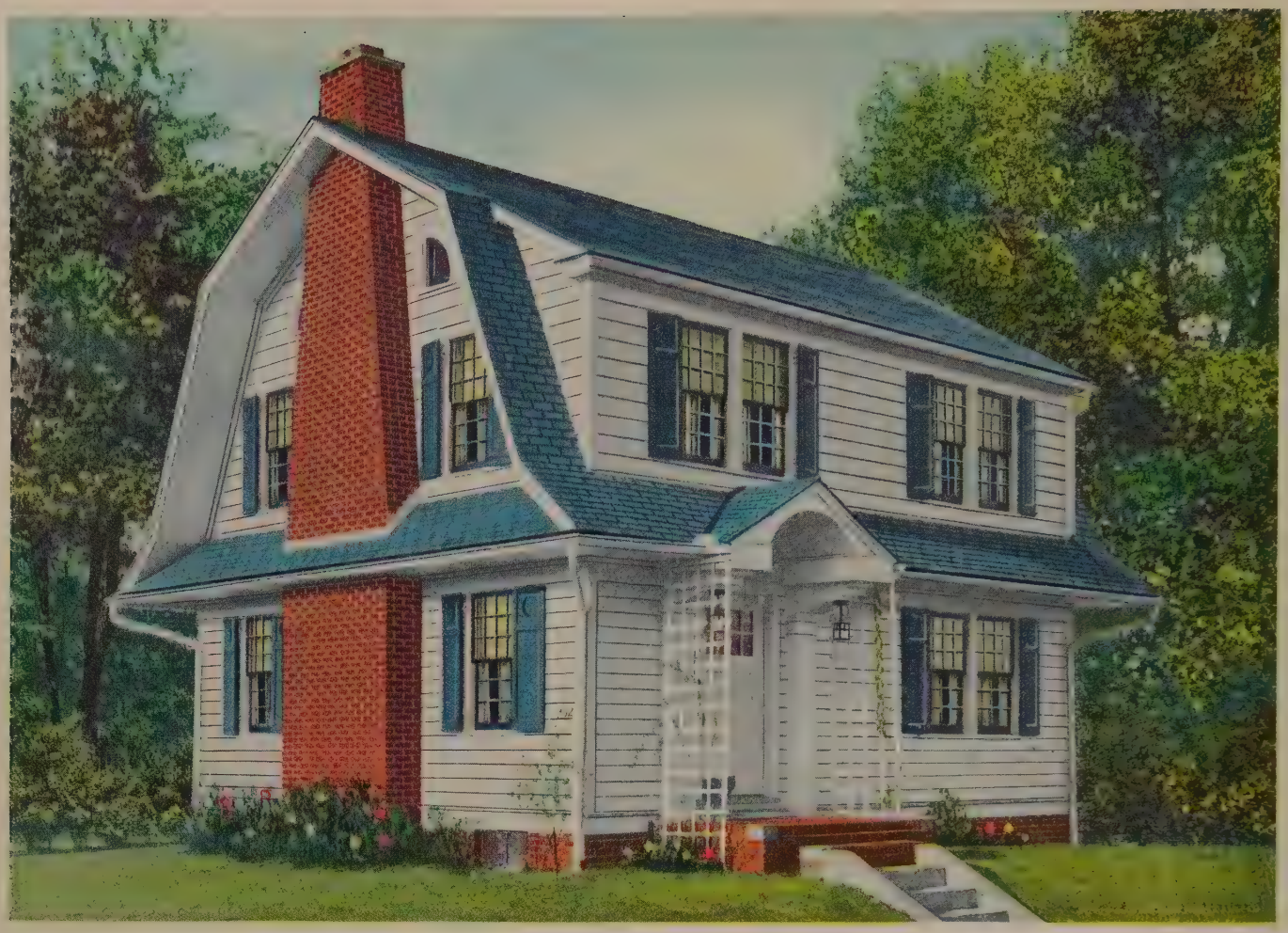
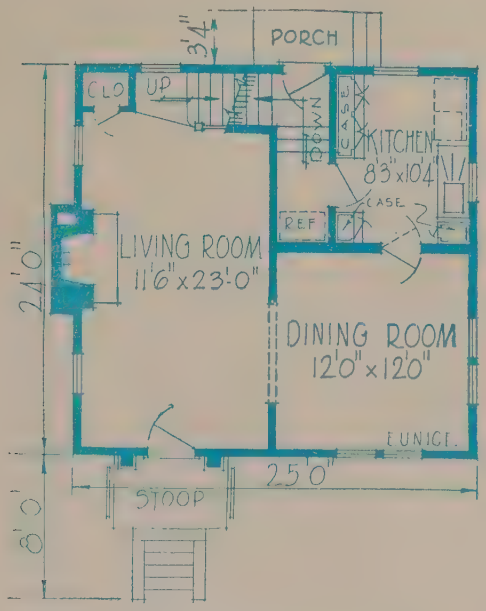
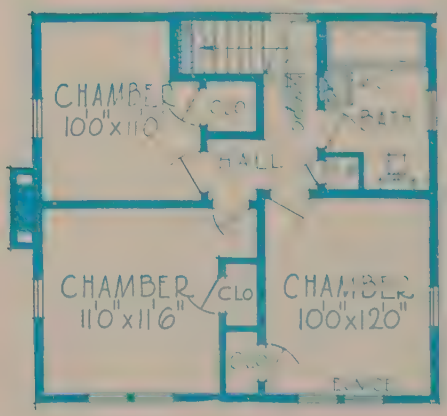


6 Rooms and Bath

The EUNICE

A FINE example of the popular Dutch Colonial, with its gambrel roof and dormer windows. The treatment of the chimney and roof lines and the trellises at the entrance are unusual. A well planned interior arrangement gives an extra large living room and a light, cheerful dining room. Built-in conveniences are plentiful.





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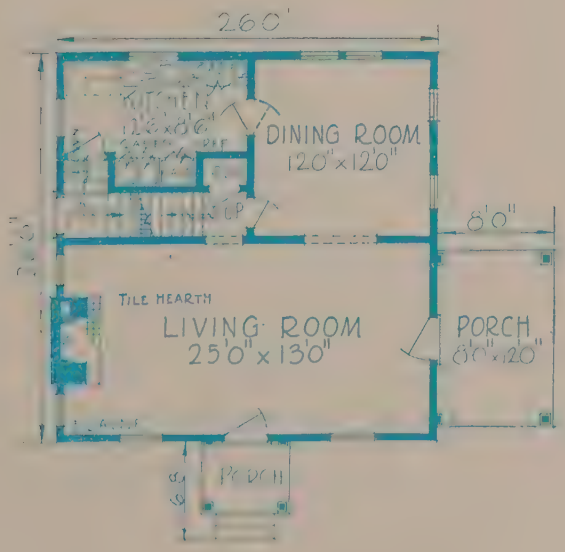
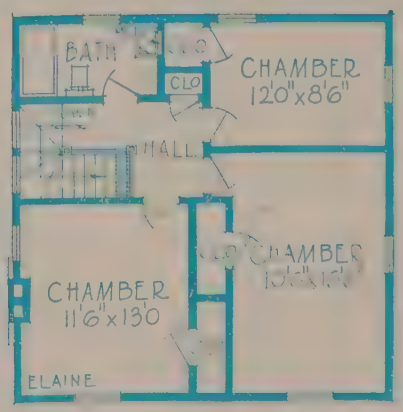
6 Rooms and Bath

The ELAINE

AN INTERESTING combination of siding and stucco that produces an attractive exterior. Note the large living room, the well-equipped kitchen, the splendid arrangement of the second floor. The open porch is easily accessible through a doorway in living room.





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6 Rooms and Bath

The ELLIOT

THE COLORFUL appearance of this home is accomplished through a clever combining of materials with the walls of white shingles. Even a two-toned effect is carried out in the chimney built of white and variegated brick. The interior is exceptionally well planned.

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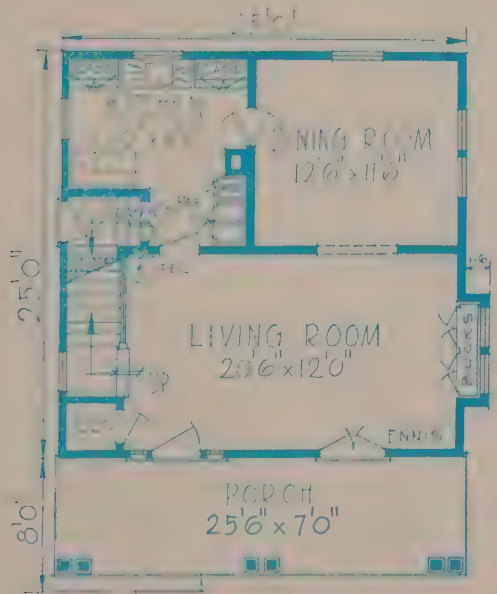
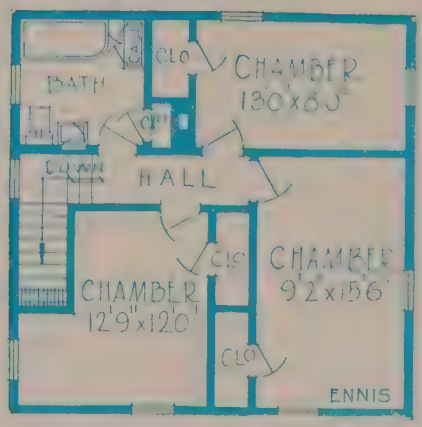
6 Rooms and Bath

The ENNIS

THE LONG sweep of roof is effectually broken by the recessed bedroom windows, the shingled walls and bay. The full width front porch make this home reminiscent of the Southern Colonial. Both doors from the porch enter into the living room. A well arranged interior with plenty of closet space includes many built-in conveniences.





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6 Rooms, Bath and Sun Room

The ELGIN

HERE is a true picture of "home." Wonderfully appealing in its dignified simplicity, yet colorful to just the right degree. There is a pleasant open porch, a cozy sun room and a splendid arrangement of conveniently equipped rooms, including a model kitchen, a large living room, and on the second floor one of the chambers is of exceptional size. Note the number of closets upstairs and down, and the built-in features.

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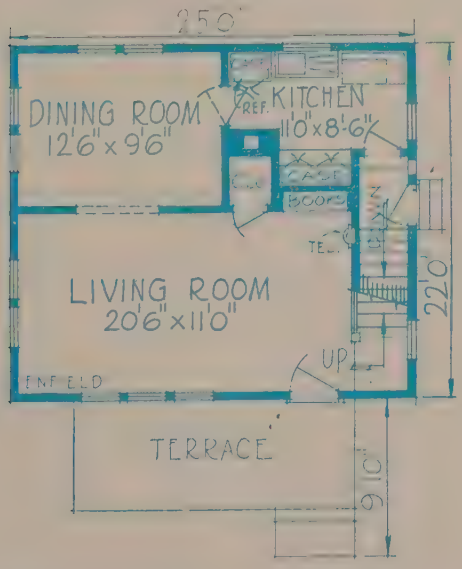
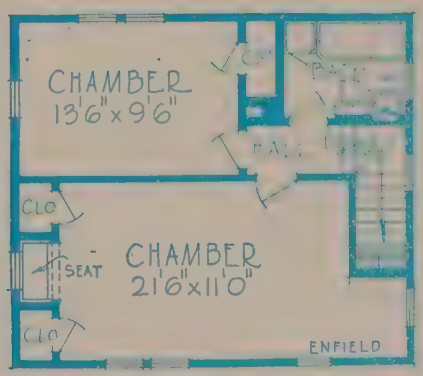
5 Rooms and Bath

The ENFIELD

A HOME of simple, tasteful design. White siding walls on brick foundation capped by a roof of fine proportions. The front window groups and carefully drawn entrance are most suitable, while a modest entrance with balanced window openings finish the side wall to advantage. Second floor interior arrangement shows a bedroom running across the entire front half of the entire floor with a window seat at one end.





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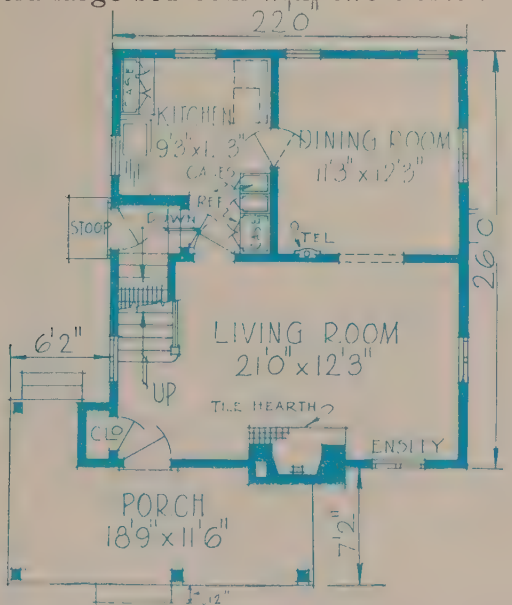
5 Rooms and Bath

The ENSLEY

THE VARIED wall treatment of this house, the chimney with its ornament, and the steep roof lines give an informal inviting appearance. Among other things there is a well arranged kitchen with built-in conveniences; a natural fireplace in the living room, and an extra large bedroom with two closets. A large cedar lined closet is always convenient.



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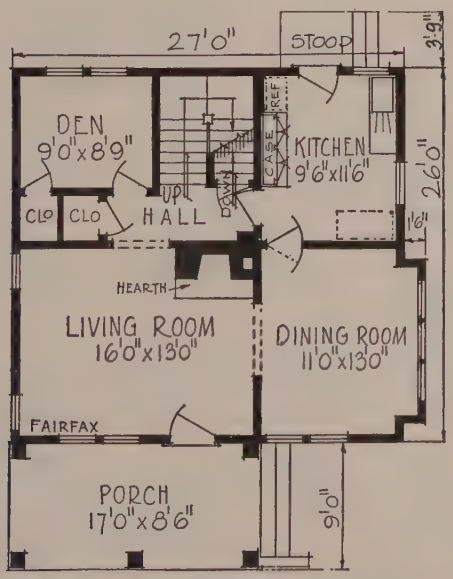
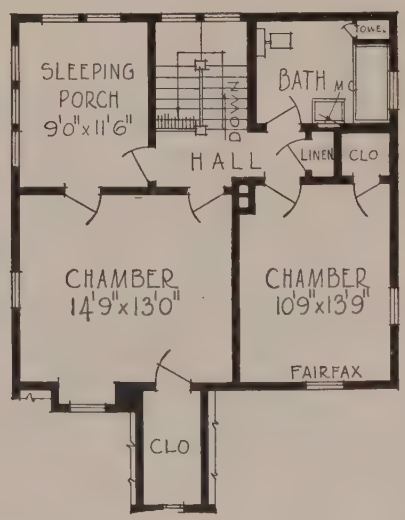
5 Rooms, Bath, Den and Sleeping Porch

The FAIRFAX

THIS cozy home is entered from a comfortable open porch, directly into the living room with its corner fireplace. There is a central hall, a den, convenient kitchen with built-in cabinets and a dining room. Upstairs are two large chambers and sleeping porch, linen and clothes closets and bathroom with built-in towel cabinet. All closets are large.





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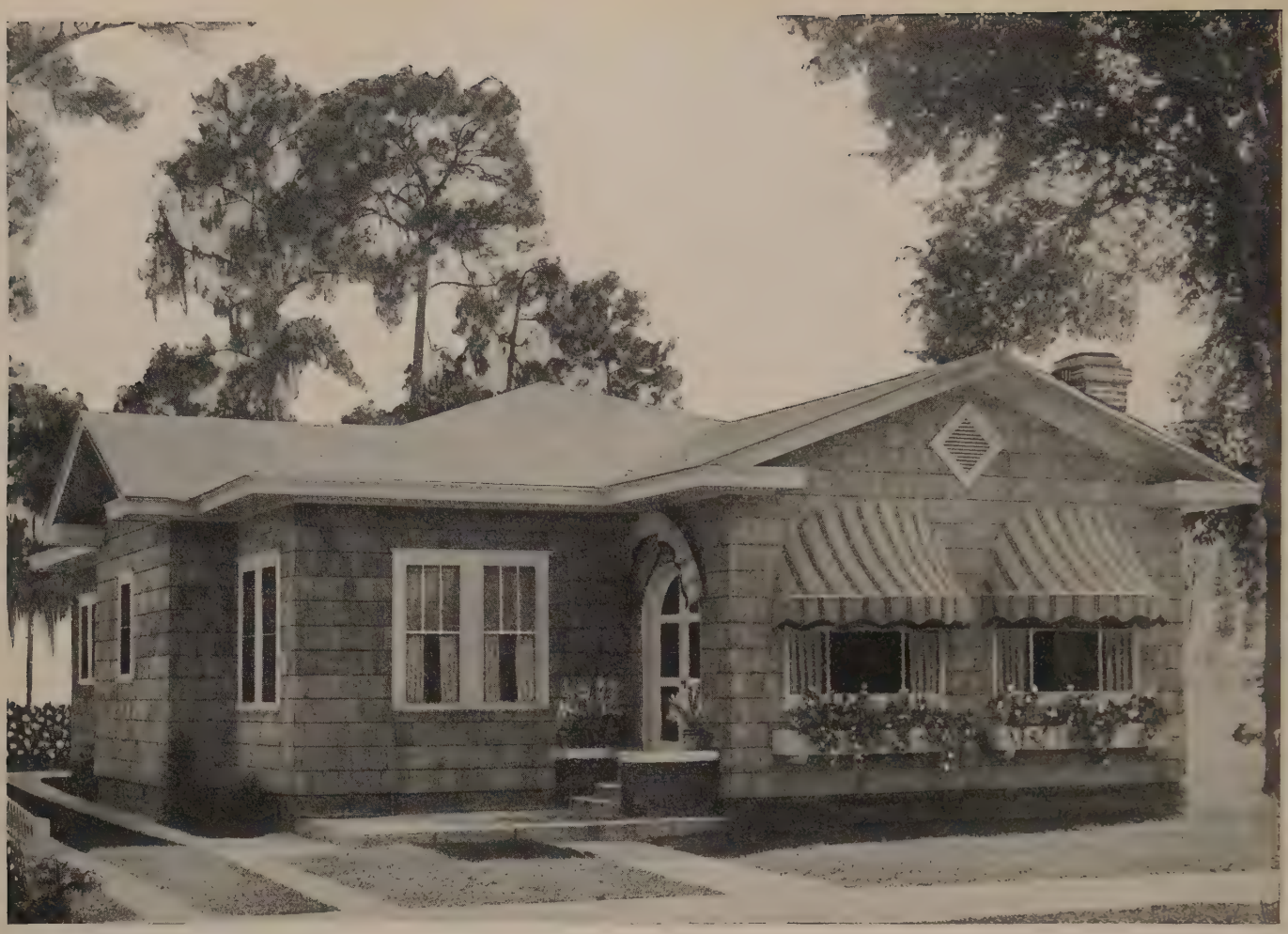
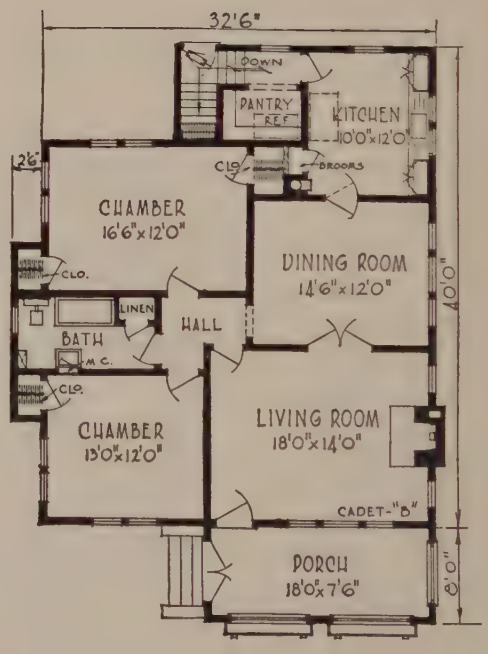


5 Rooms and Bath

The CADET

A RAMBLING type of bungalow that uses shingles for the exterior. The broad, low roof lines and general outside arrangement make it a home of very distinctive appearance. Much convenience and comfort will be found in the well planned interior, with its many built-in features.



A Modern Utility Kitchen

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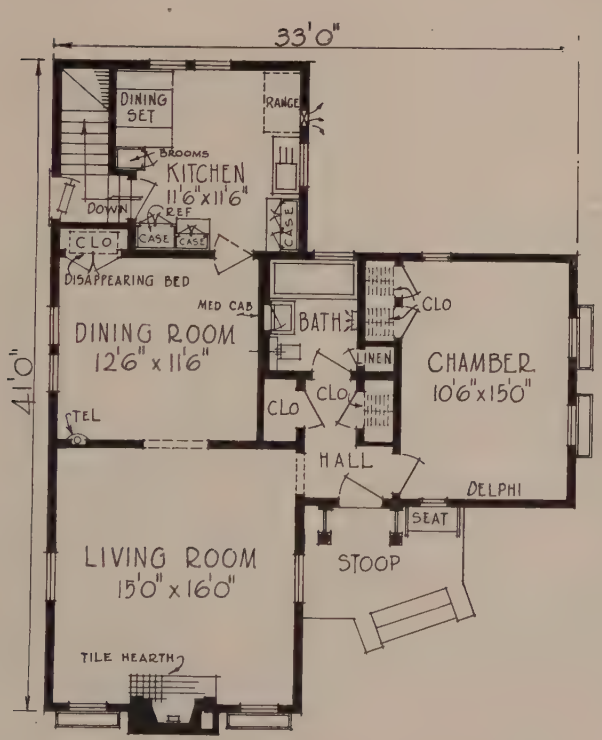
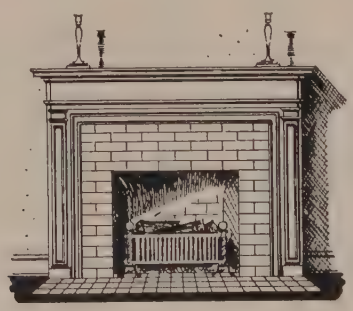
4 Rooms and Bath



The DELPHI

THIS handsome bungalow of unusual design has many good points to recommend it. Among its features are asphalt shingles for the roof, brick stoop, model kitchen, disappearing bed in dining room (an often appreciated convenience) delivery receptacle in back door, built-in telephone cabinet and space saving closet fixtures.



View of Fireplace

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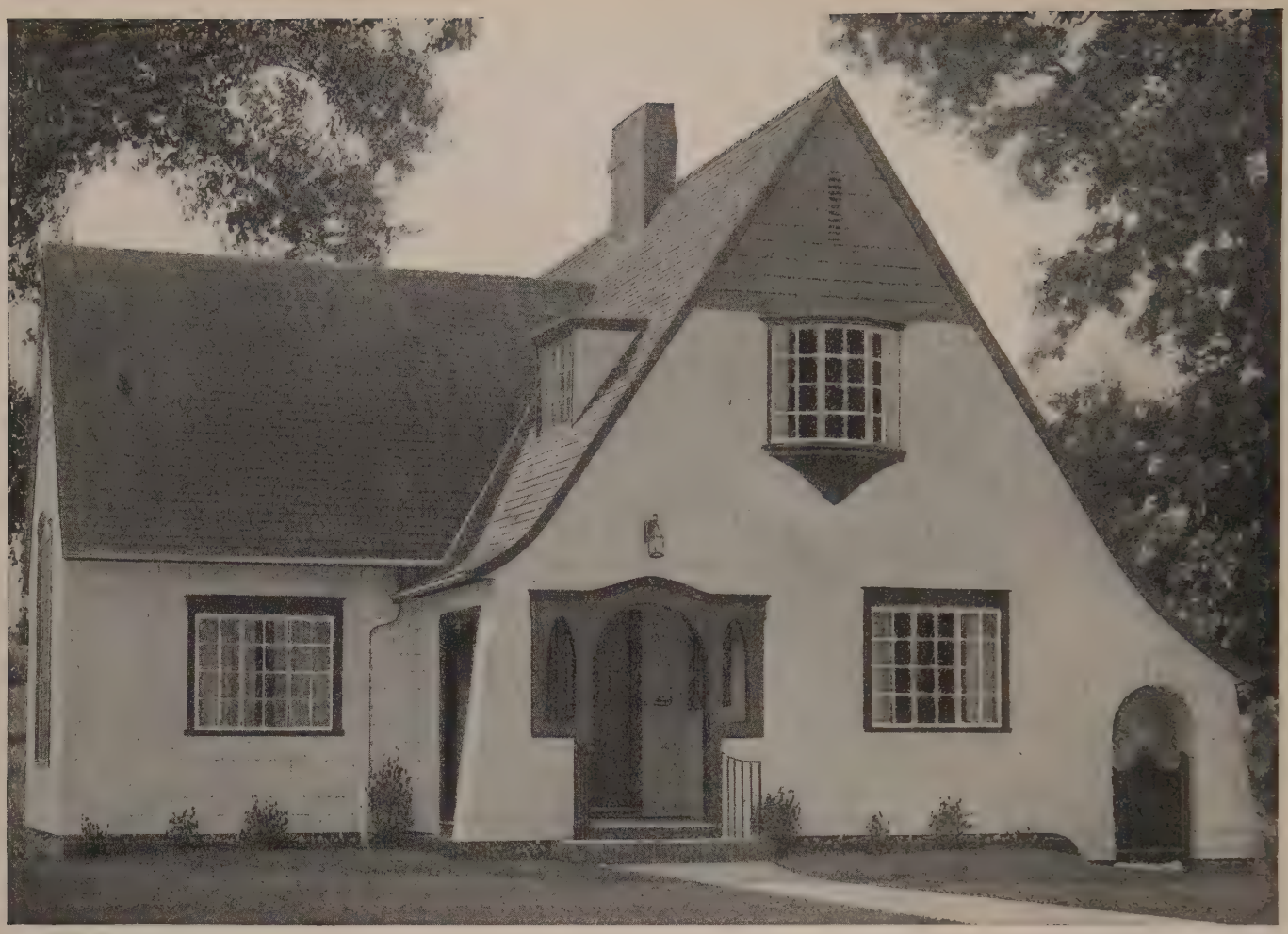
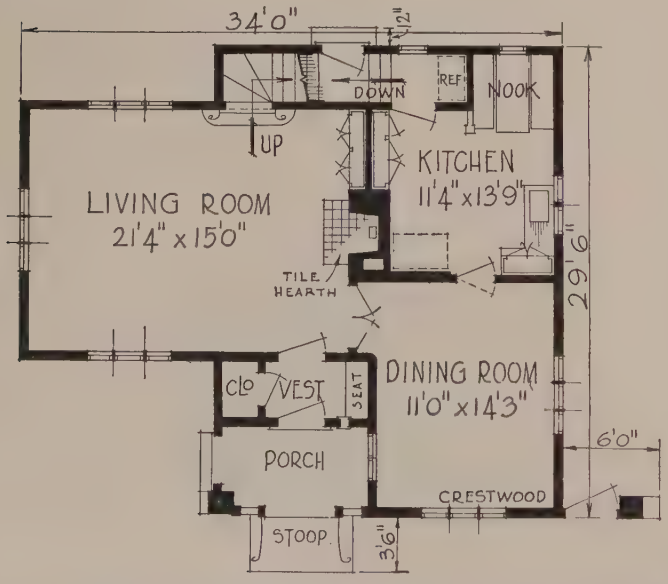
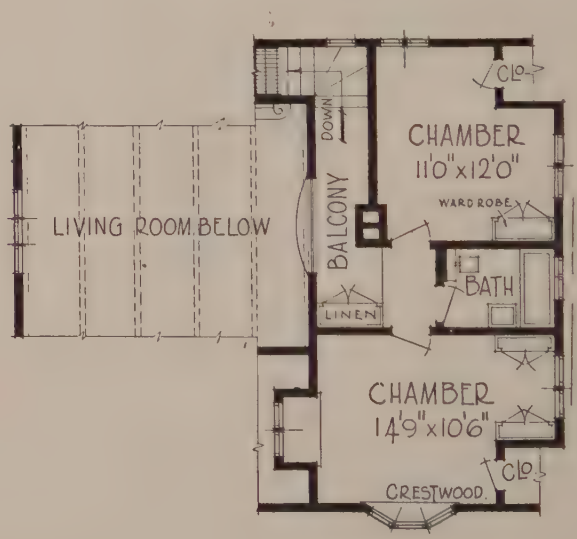


5 Rooms, Bath and Nook

The CRESTWOOD

THE English cottage style in its fullest charm. A splendid arrangement of rooms including a two-story living room. Steel sash are generously used for windows and there is a built-in dining nook, mail-box and many other comfort bringing features.





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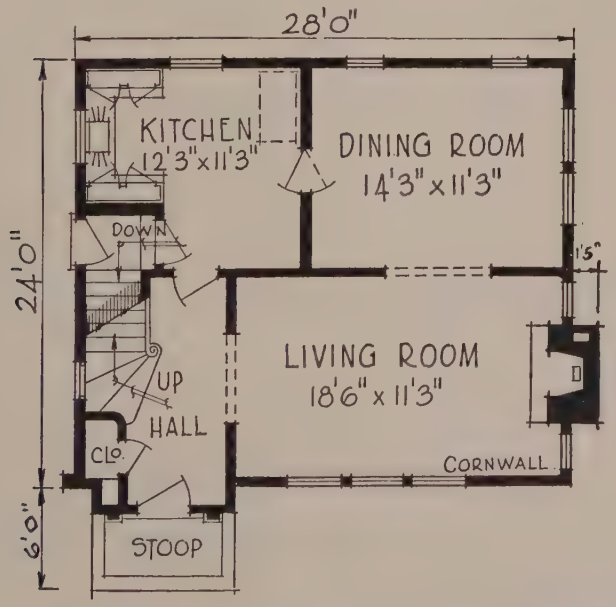
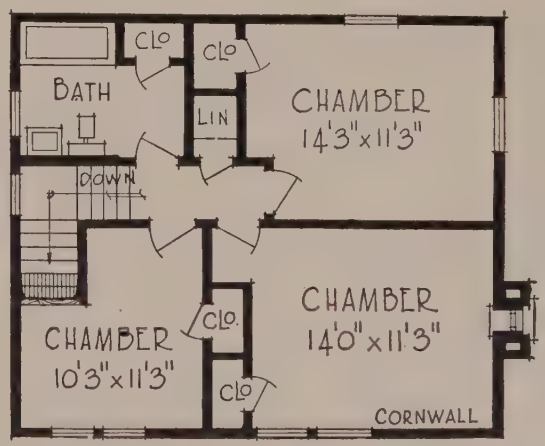
6 Rooms and Bath

The CORNWALL

SHINGLE construction is set off to advantage by shutters and white trim in this attractive home. Note the trellised archway at left, the picturesque entrance and the well planned interior, which shows a convenient arrangement of large and inviting rooms.





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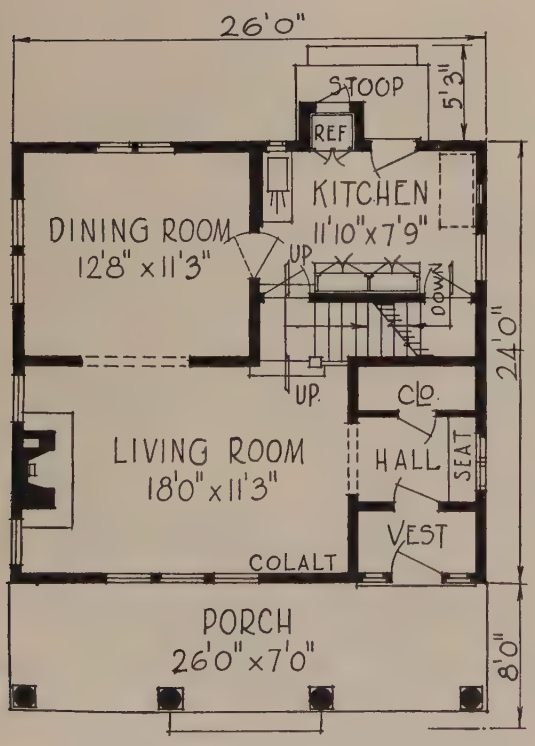
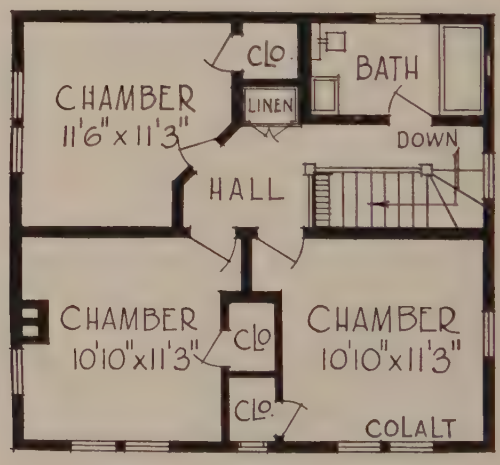
6 Rooms and Bath



The COLALT

AN ATTRACTIVE example of Dutch Colonial architecture utilizing white siding in pleasing combination with shuttered windows. There is a large open porch and a well arranged interior that is convenient and modern.



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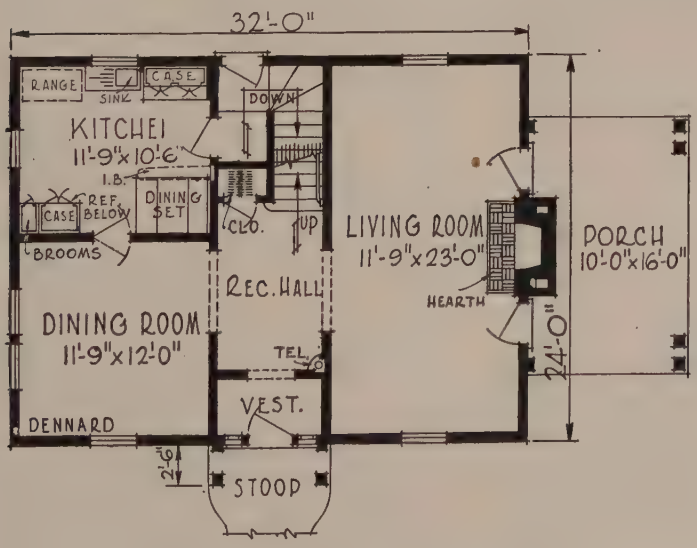
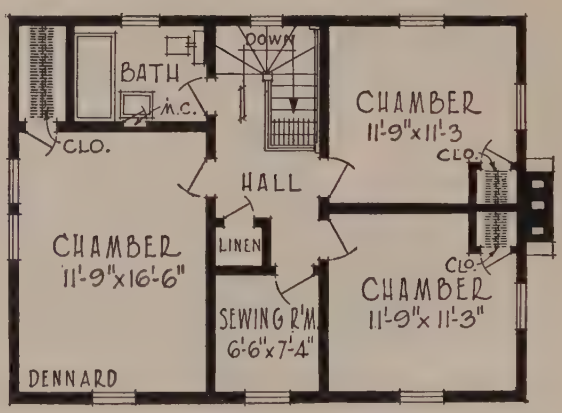
6 Rooms, Bath and Sewing Room

The DENNARD

A SHINGLED exterior, an asbestos shingle roof in a striped design, and an unusually well planned and conveniently equipped interior makes this a comfortable, attractive and very desirable home. Note the splendid living room, the inviting screened porch, the many built-in conveniences, including space-saving closets, dining set, phone cabinet, etc.





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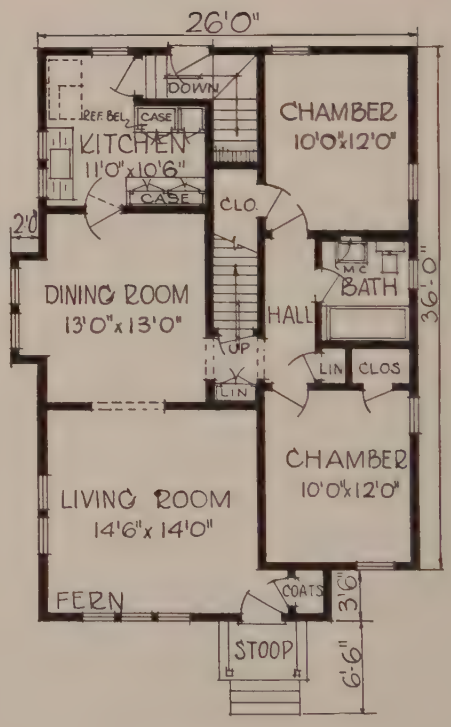
5 Rooms and Bath

The FERN

HERE is a charming home of shingles where attractive roof lines are carried out in curves and angles. There is a railed stoop and an inviting entrance. Front windows are decorative as well as useful and a dormer in attic breaks the lines of roof. Inside there is a particularly good arrangement of rooms including an efficiency kitchen with built-in cabinets, a model bathroom and two chambers. There are linen and clothes closets, a coat closet in the jog of living room and plenty of space in the attic suitable for a large comfortable sleeping chamber.

Showing a possible bedroom in the attic



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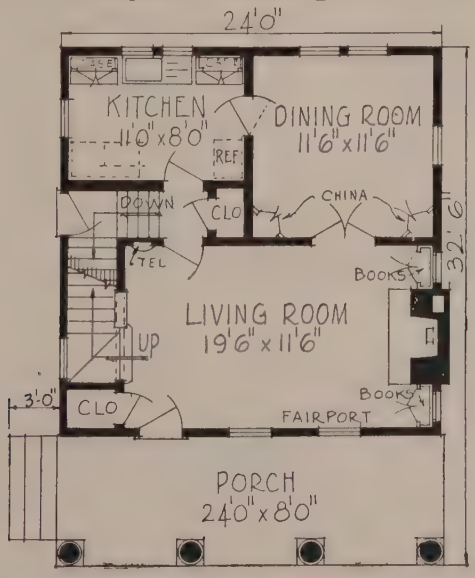
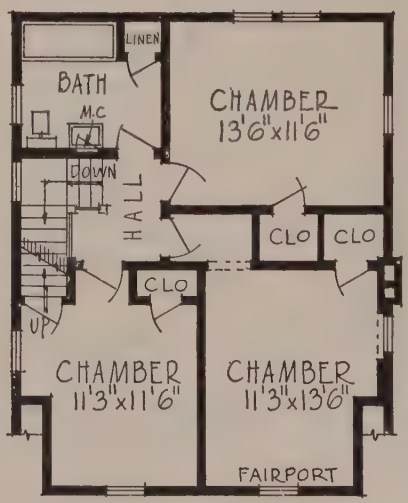
6 Rooms and Bath

The FAIRPORT

An attractive home where broad, sweeping roof lines and dormer combined with shingles and siding add much to the exterior. There is a large open porch, large living room with fireplace, built-in book cases and phone cabinet. An efficiency kitchen and dining room with built-in corner cabinets. Three chambers upstairs with bathroom and ample closet space, including linen closet. Note the attic stair leading from front chamber.





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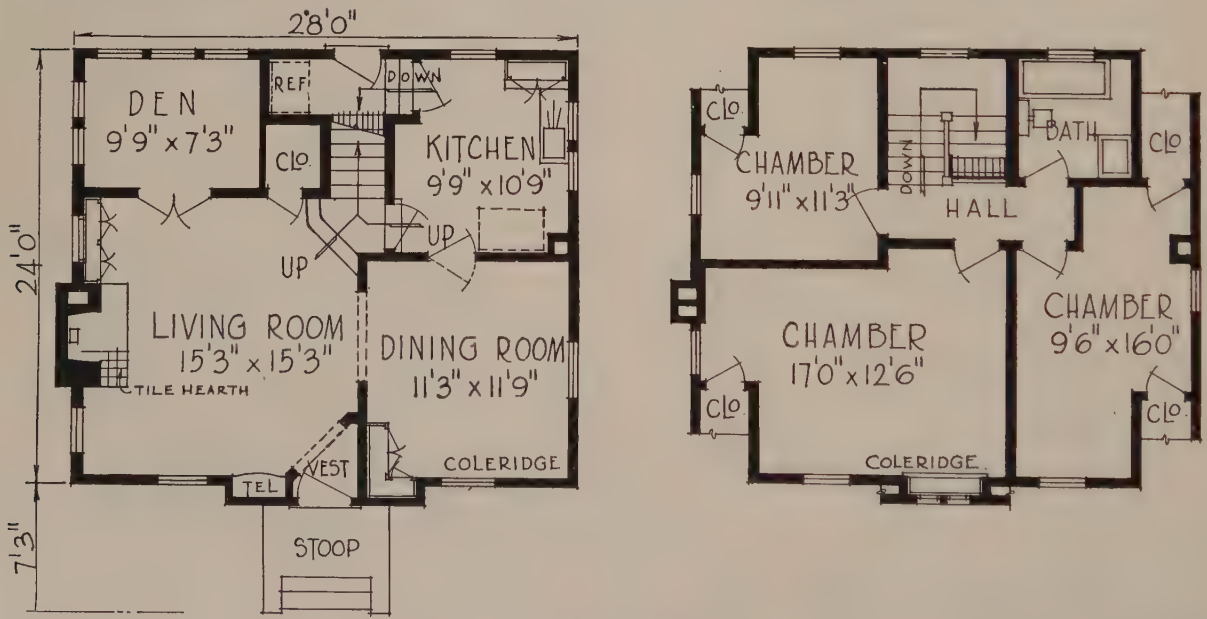
6 Rooms, Bath and Den

The COLERIDGE

THE front gable over entrance, breaking through the projecting roof, gives an added touch of individuality to this charming home. Rooms are of ample size and well arranged, both for convenience and comfort. There are plenty of closets.



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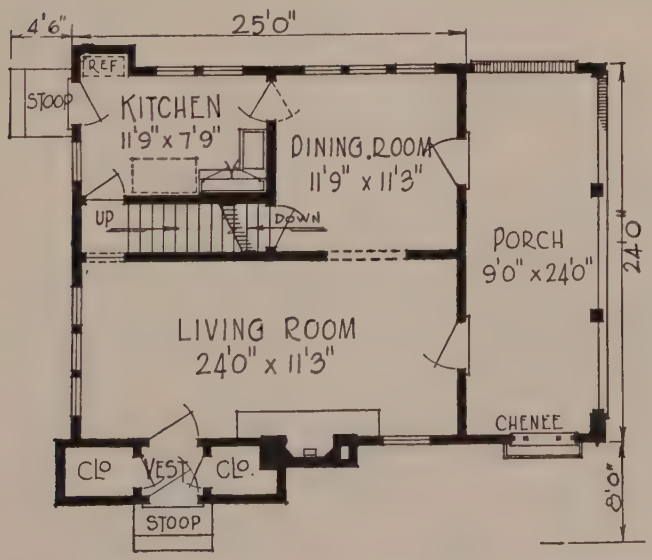
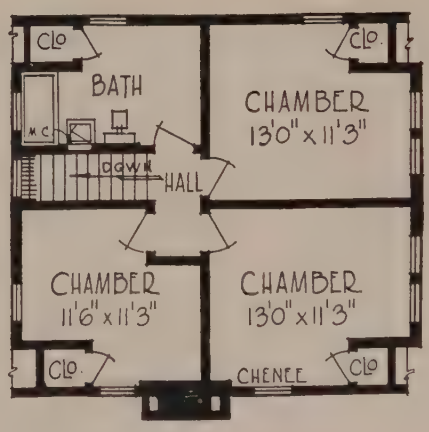
6 Rooms and Bath

The CHENEE

THE white siding of walls, the shuttered windows, the imposing chimney and pleasing entrance, and the graceful roof lines combine to make this attractive home. The interior is well and conveniently planned. There is a large, open porch at side.





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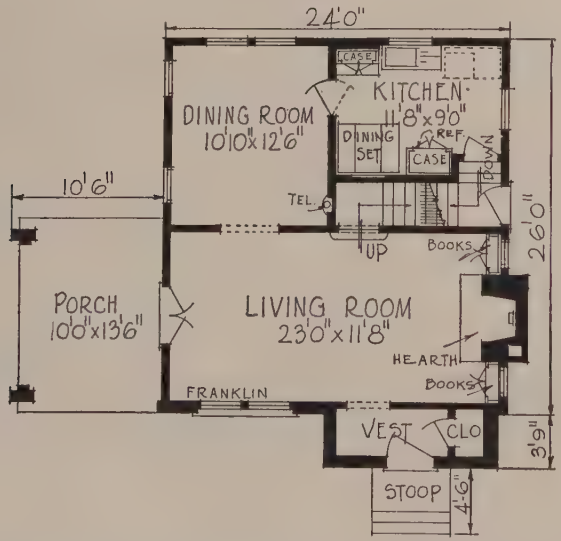
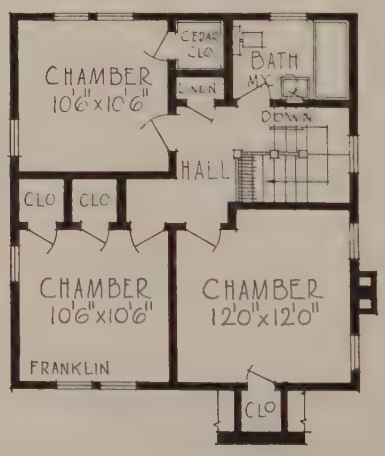
6 Rooms and Bath

The FRANKLIN

BRICK and shingles form this attractive exterior. Note the pleasing gable with its inviting entrance and stone decoration. There is an unusually comfortable and convenient interior with many built-in features including dining set and cabinets in the model kitchen, and book cabinets on either side of the living room fireplace. Upstairs rooms are large. There is a cedar closet, linen and clothes closets and a large bath.





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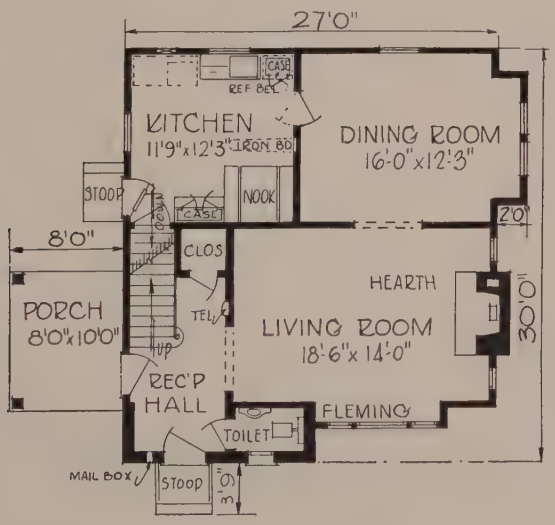
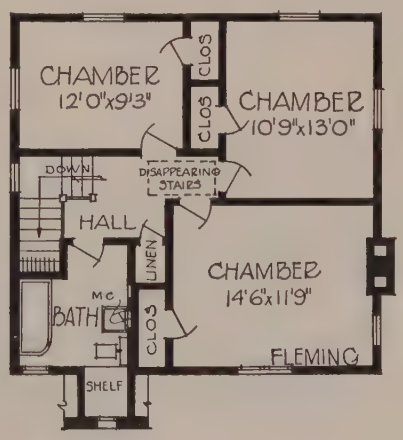
6 Rooms, Toilet and Bath

The FLEMING

SHINGLES, with a gable and entrance of brick form the attractive exterior of this home, the comfortable open porch enters directly into reception hall. There is a good size living room with fireplace, a kitchen with built-in nook and cabinets, a dining room, and toilet on the first floor. Three chambers upstairs, a bath room, linen and other closets. A disappearing stairway leads to attic. This home is appropriate for any location.





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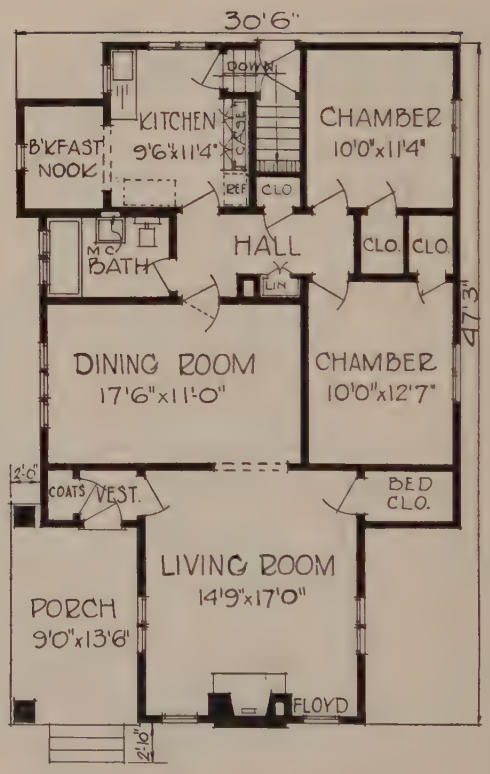
5 Rooms and Bath

The FLOYD

An attractive home of siding, with brick porch columns, stucco and half timbering at gables. Note the ornamental rail on porch roof, the comfortable open porch and impressive brick chimney. Rooms are well planned and arranged. Off living room is a disappearing bed closet, and a coat closet in vestibule. Kitchen has adjoining breakfast nook and cabinets. The two comfortable chambers are convenient to bath.



This corner fence offers protection and adds to beauty

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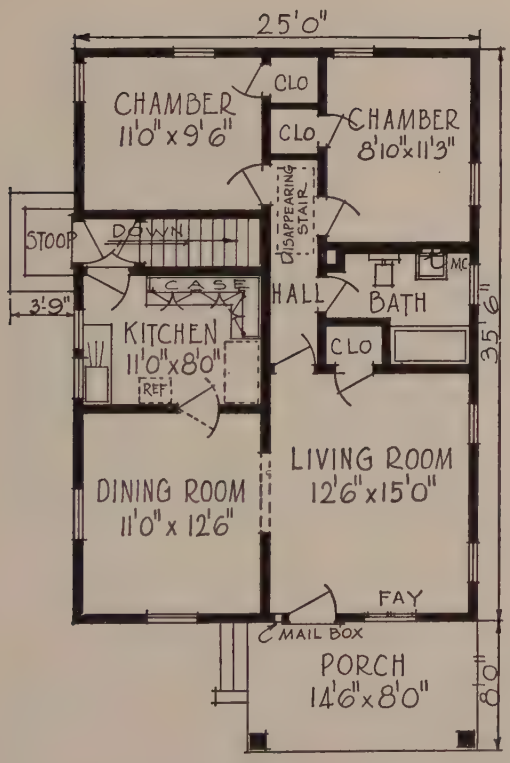
5 Rooms and Bath



The FAY

SHINGLES are effectively used for the walls of this charming home. Note the built-in mail box in corner of living room with the large closet, the built-in cabinets in kitchen, the model bathroom, the two large chambers, the well placed closets and the stoop at side where stairs lead to basement. The attic is easily reached by a disappearing stairway conveniently located in hall.

Graceful arbors make the yard a beauty spot

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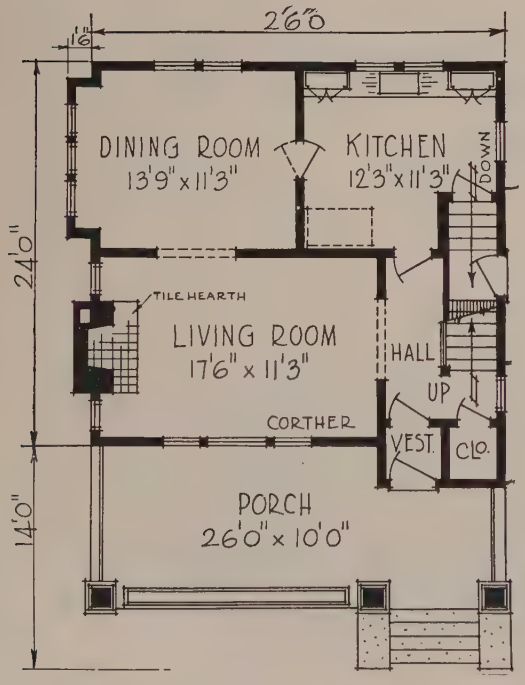
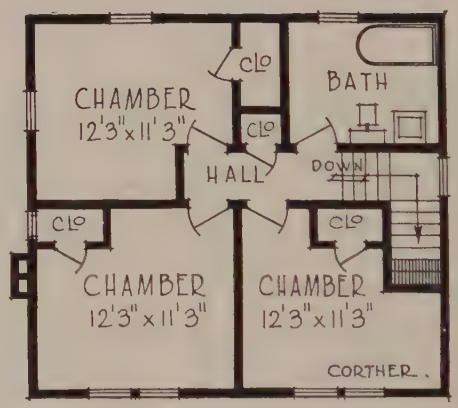
6 Rooms and Bath

The CORTHER



A PLEASING combination of shingles and siding for outside walls, with brick for steps and porch column foundations. There is a tile roof and a well planned interior.



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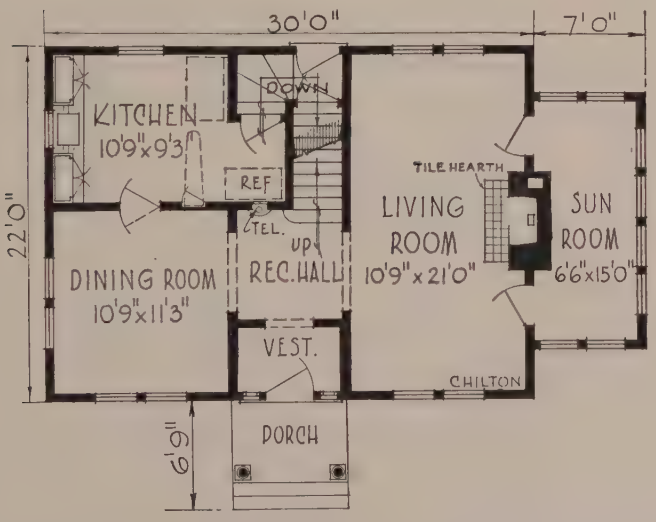
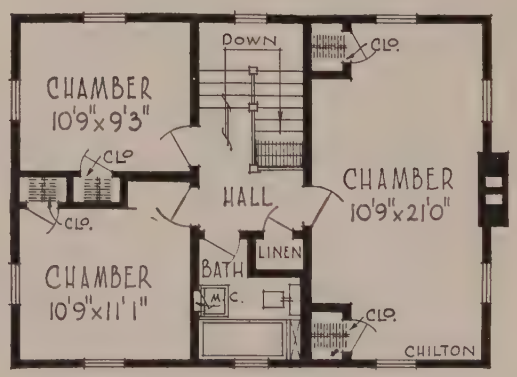
6 Rooms, Bath and Sun Room

The CHILTON

THE mottled shingled effect of the roof contracts pleasingly with the white siding of exterior. An attractive entrance leads into a large reception hall. There is a pleasant sun room, and an exceptionally large chamber across the entire depth of the house. Closet space is ample and convenience will be found on every hand. Note large living room.





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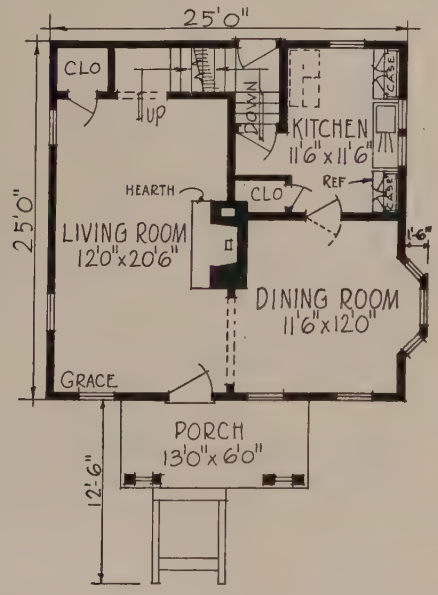
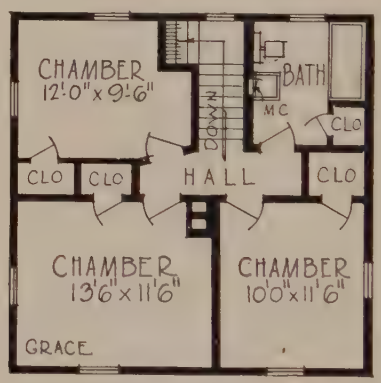
6 Rooms and Bath

The GRACE

HERE is a well arranged home with large living room and convenient fireplace. A conveniently arranged kitchen with built-in cabinets. Upstairs there are three comfortable chambers, a bathroom and plenty of closet space. Note the large, trellised porch and terraced effect of front lawn. This type of home offers most space at least cost.





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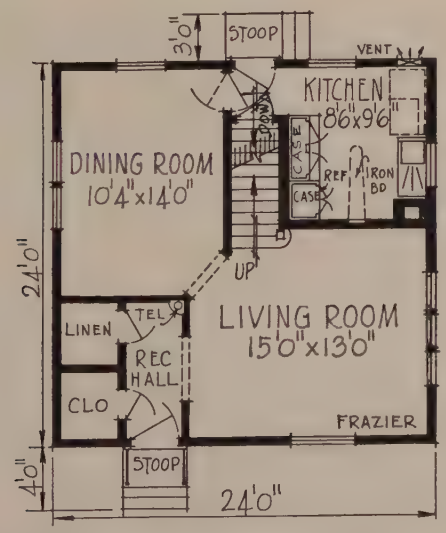
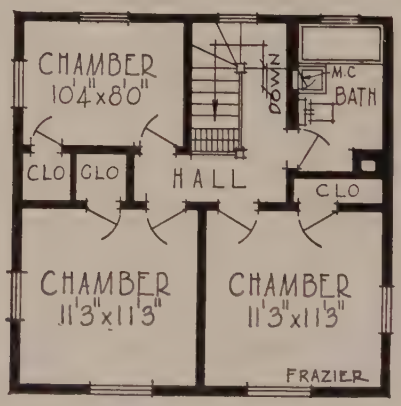
6 Rooms and Bath

The FRAZIER

WHITE siding walls on brick foundation and a shingled gambrel roof with dormer comprise the main elements of this delightful home. The dark shutters tie in with the roof color which together with the inviting entrance constitute attractive additions to the front wall. A telephone cabinet in the reception hall and many kitchen conveniences including cabinets and ironing board are built-in. Construction costs are moderate.





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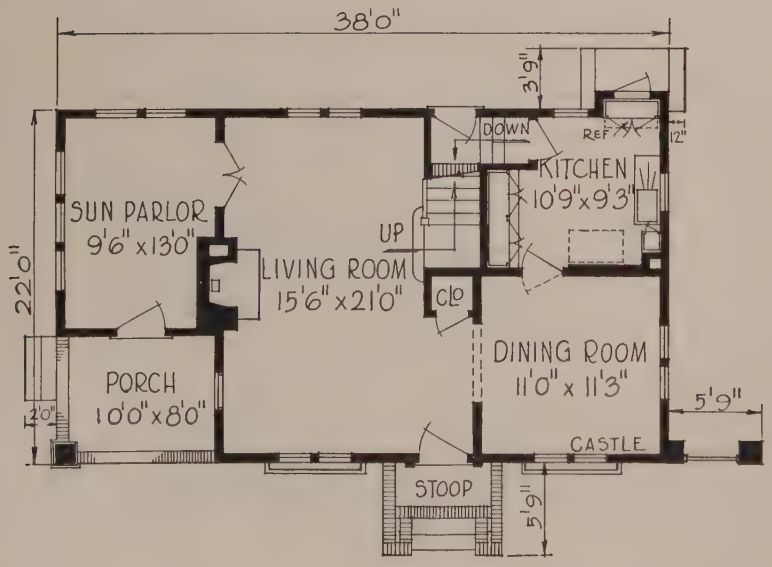
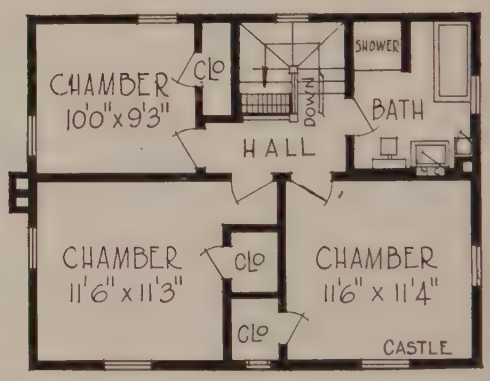
6 Rooms, Bath and Sun Parlor

The CASTLE

A HOME of distinctive charm and dignity. The archway and ornamental gate at the right and the railings at lower windows give a touch of simple artistry. Rooms are large and well arranged. Upstairs there are three chambers, bath and shower.





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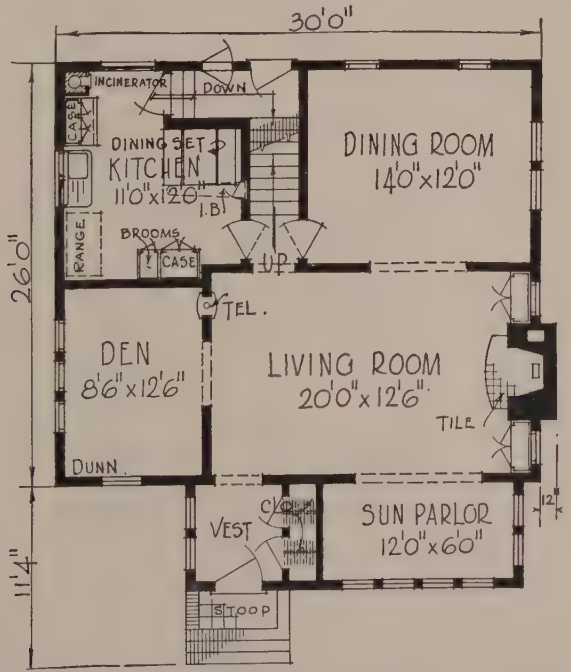
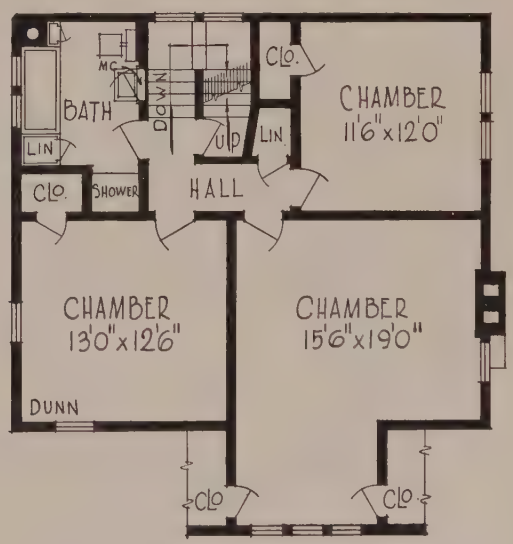
The DUNN

6 Rooms, Bath, Den and Sun Parlor

AN INEXPENSIVE and charming home that is particularly well planned inside to bring convenience and comfort in fullest measure. The plans are well worth more than passing notice because of the splendid arrangement and the many built-in features.





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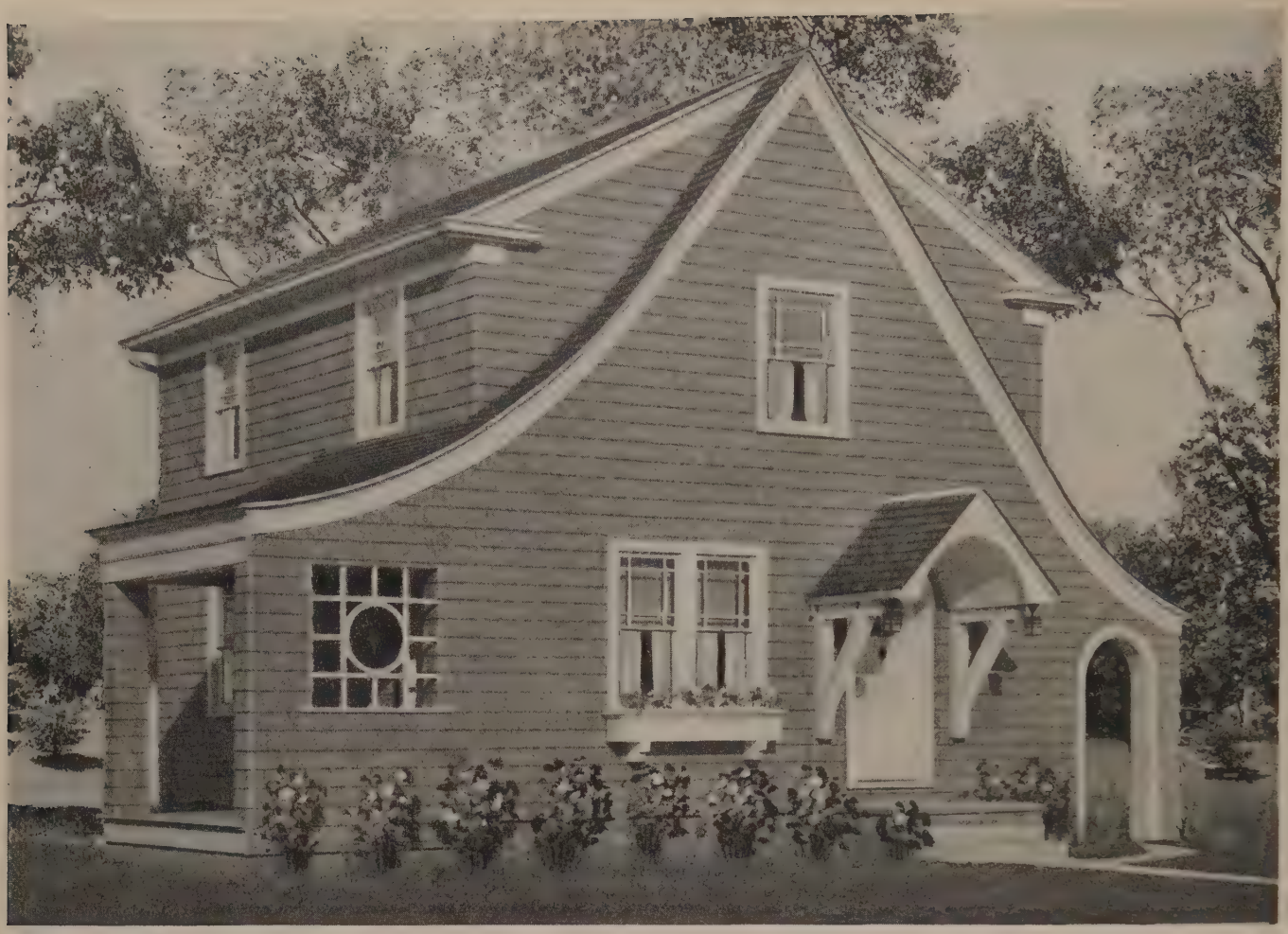
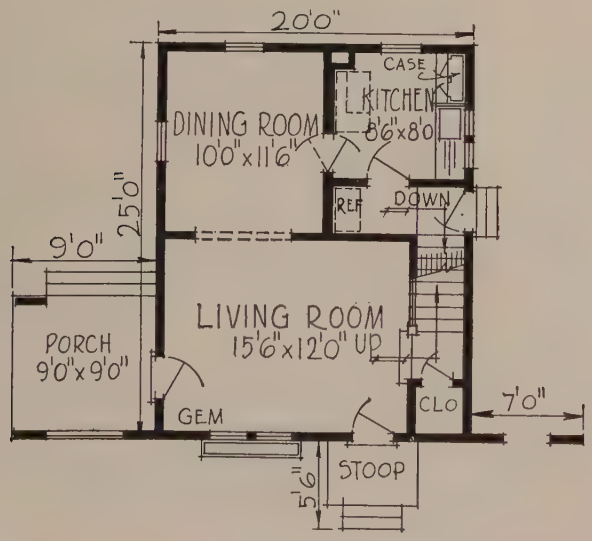
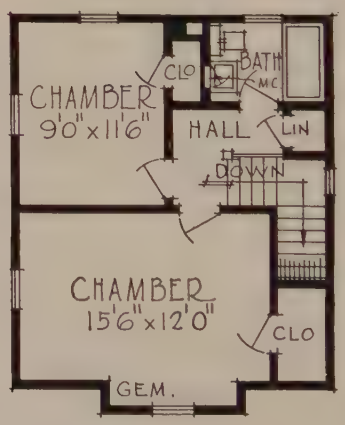


5 Rooms and Bath

The GEM

GREY SHINGLED walls and shingled roof have been trimmed pleasingly with white. The inviting entrance and side porch both open into the living room. Cabinets are built into the kitchen. The interior arrangement is planned to secure maximum sunlight.





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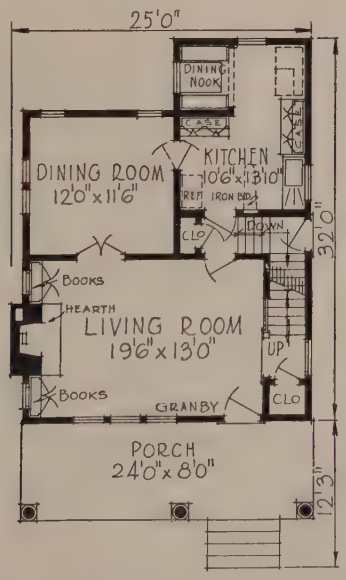
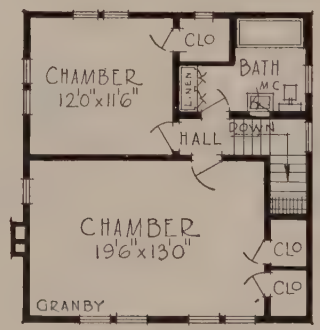
5 Rooms, Bath and Dining Nook

The GRANBY

HERE is a splendid home of shingle construction, with an attractive dormer, a large, comfortable open porch and two well planned floors. Notice the size of the two chambers, the large living room, the efficiency kitchen with its many built-in units including a dining nook, ironing board, etc. Built-in bookcases are also provided.





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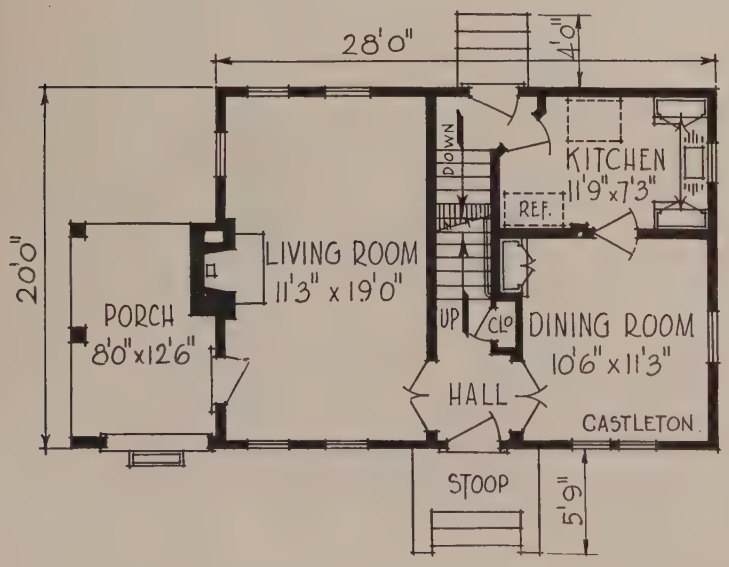
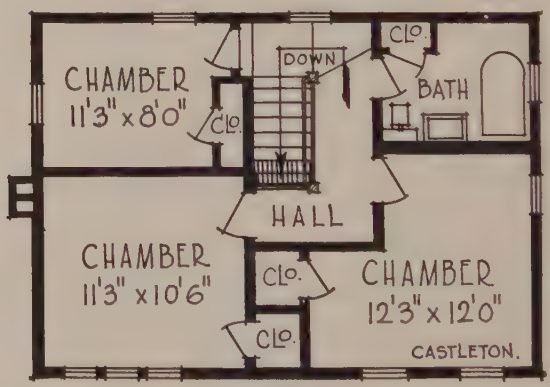
6 Rooms and Bath

The CASTLETON

A CLEVER interpretation of the English cottage style of architecture that combines unusual attractiveness with convenient comfort. Rooms are particularly well arranged and there is a delightful open porch off the commodious and comfortable living room.





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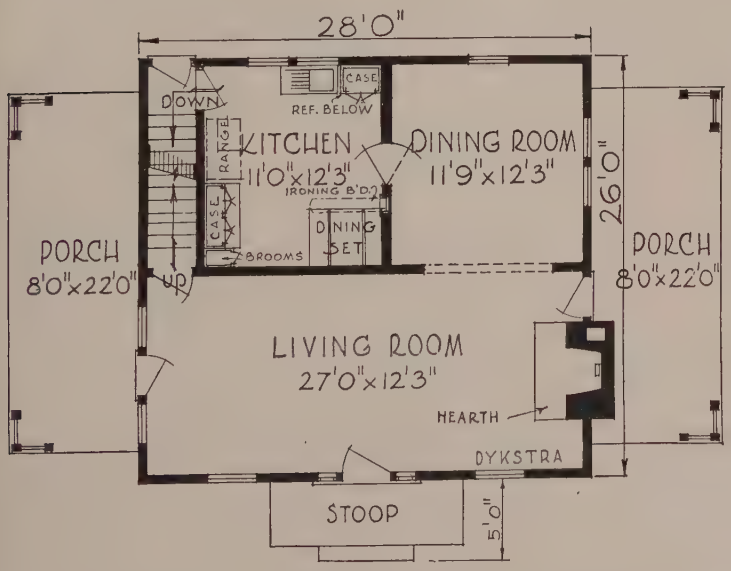
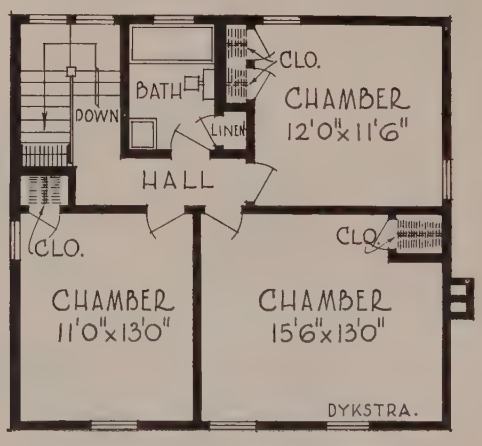
6 Rooms and Bath

The DYKSTRA

AN EXTERIOR of white siding, green shutters and a red brick chimney is always pleasing. Add to this an exceptionally large living room across the entire width of the house, space-saving closets with adjustable clothes hangers and many built-in features.





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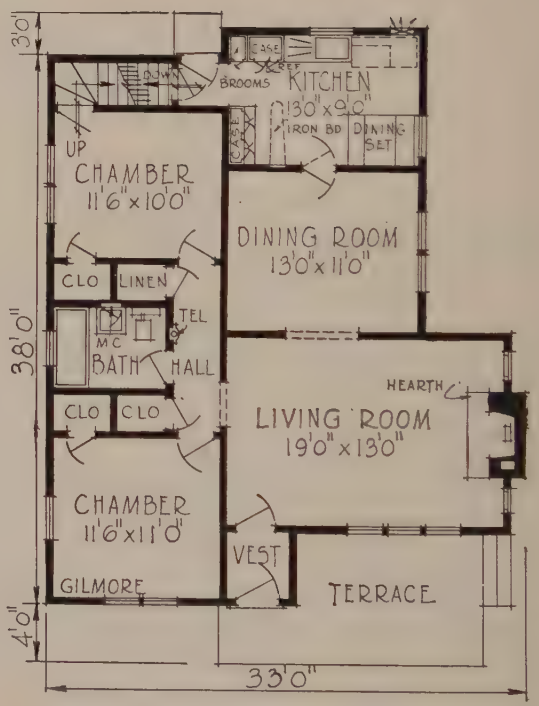
5 Rooms and Bath

The GILMORE

WHITE siding walls, asphalt shingled roof, and a foundation of concrete blocks. This unpretentious exterior has good window arrangement and a simple entrance in keeping with the rest of the design. There is a living room fireplace, built-in telephone cabinet, built-in dining set, built-in kitchen cabinet and a useful ironing board.

Garden or lawn benches beautify the grounds.



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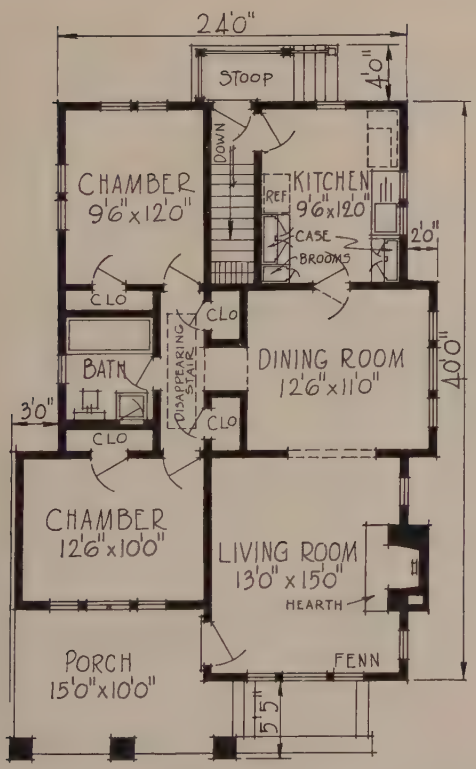
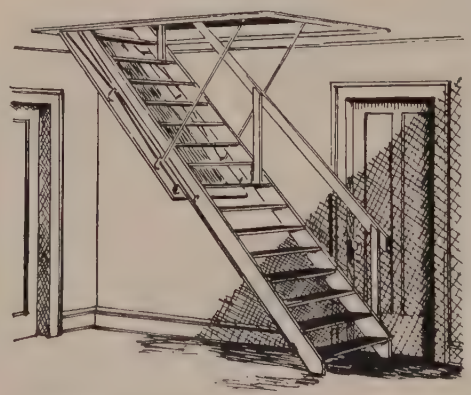
5 Rooms and Bath



The FENN

SHINGLED walls relieved by white trim at the windows and eaves. The roof is asphalt shingles. The chimney is built of face brick. An attractive gable and porch comprise an interesting front wall. The living room fireplace, disappearing stairway and built-in kitchen units are among the many conveniences. There is plenty of closet space.



Disappearing stairway gives access to the attic.

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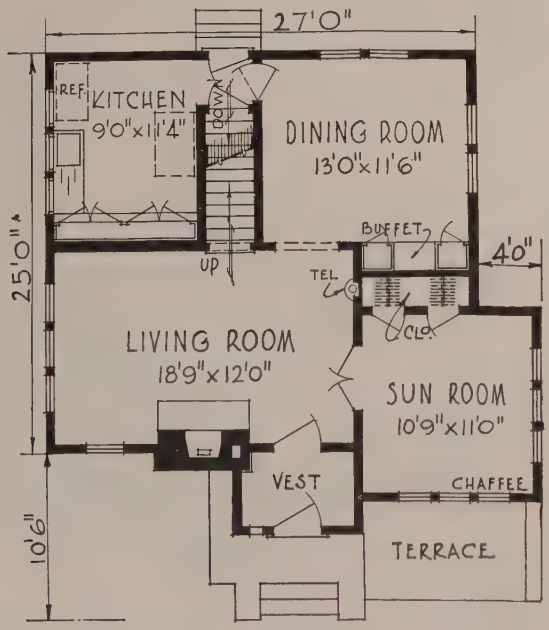
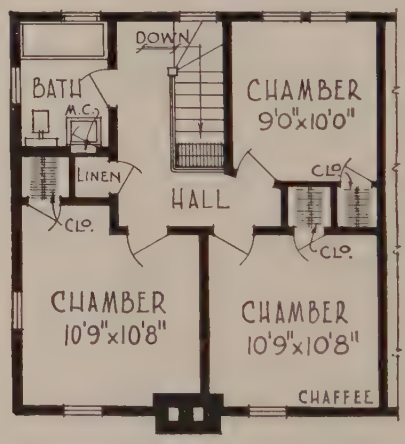
6 Rooms, Bath and Sun Room

The CHAFFEE

THE massive stone chimney and the stained shingles used for side walls contrast pleasingly in this attractive home, so ideally planned and equipped to give immeasurable comfort and untold convenience. This home can be erected at a moderate cost.





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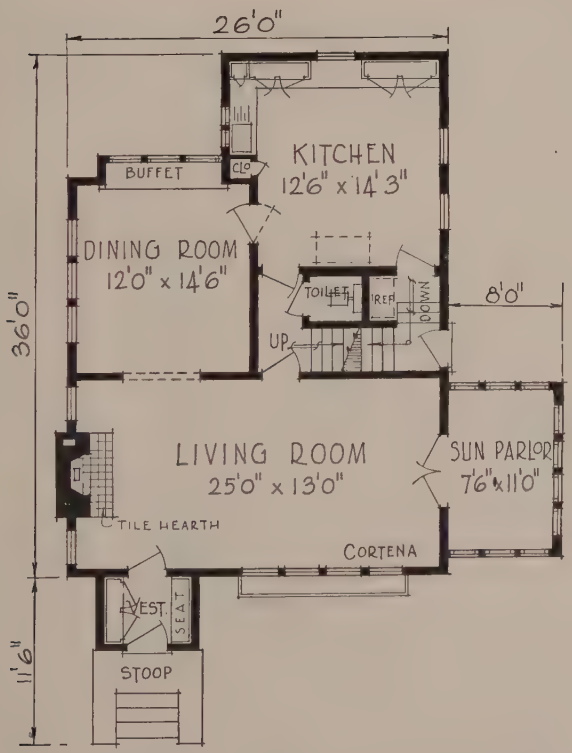
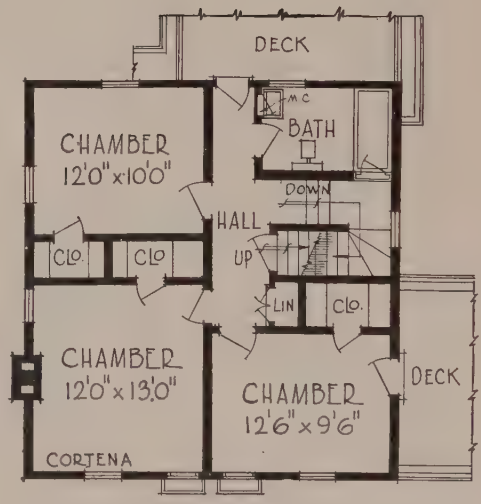
6 Rooms, Bath, Sun Parlor and Toilet

The CORTENA



SIDING construction upon a brick foundation makes this pleasing combination. The big living room with adjoining sun parlor occupies the entire width of the house. See plans.



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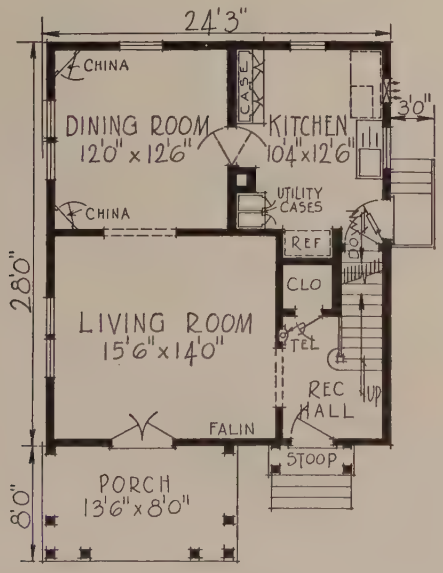
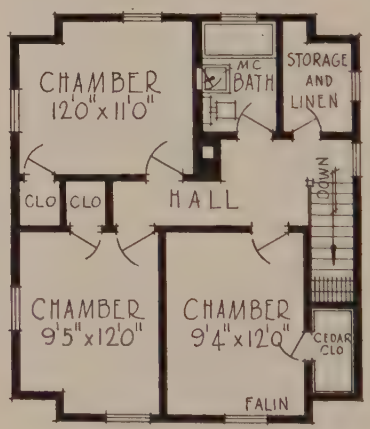
6 Rooms and Bath

The FALIN

HERE is an attractive home where simple lines give unusual charm. Note how the dormers break the sharp slanting lines of roof. The comfortable open porch with trellises opens into the living room. Study the carefully planned interior—two floors of solid comfort. Check the many built-in features, the storage and cedar closet.





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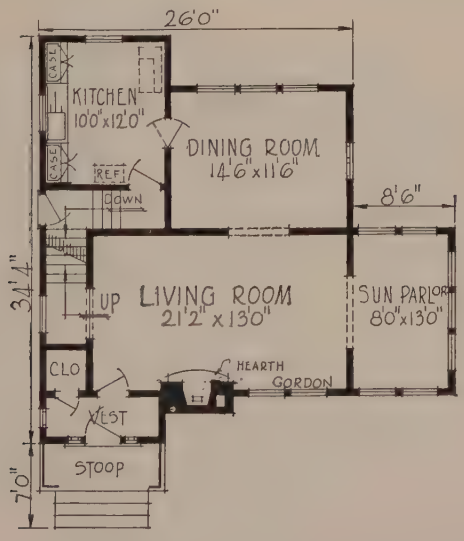
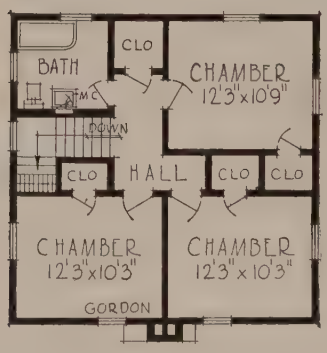
6 Rooms, Bath and Sun Parlor

The GORDON

A SWEEPING roof line, imposing brick chimney, and well designed entrance characterize this house. The walls of siding have many windows lighting a conveniently planned interior. A fireplace in living room and built-in kitchen cabinets are among the features of this desirable home. A sun parlor is always very much appreciated.





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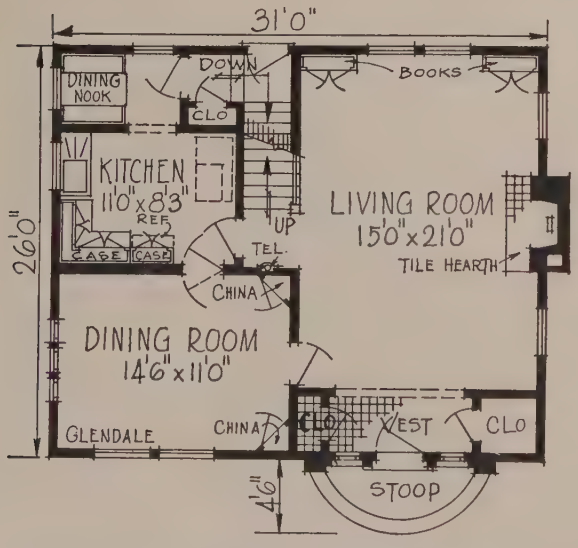
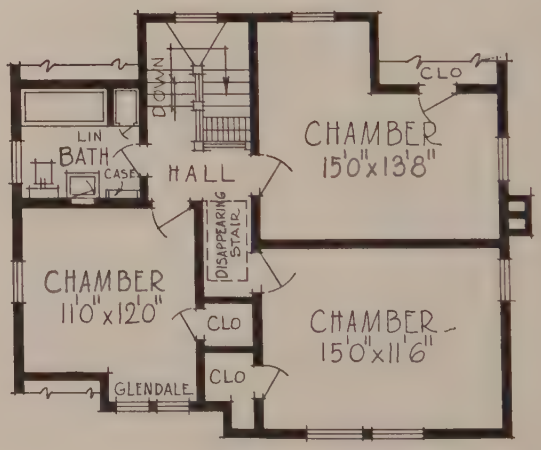
6 Rooms, Bath and Dining Nook

The GLENDALE

SHINGLED walls and roof are effectively relieved by stucco and half timbered gables and white trim. The use of brick at the entrance is another pleasing departure. The living room contains a natural fireplace and built-in bookcases. China corner cabinets are built into the dining room, and the kitchen is provided with built-in cabinets. Disappearing stairs in the second floor hall leading to the attic can be used advantageously.





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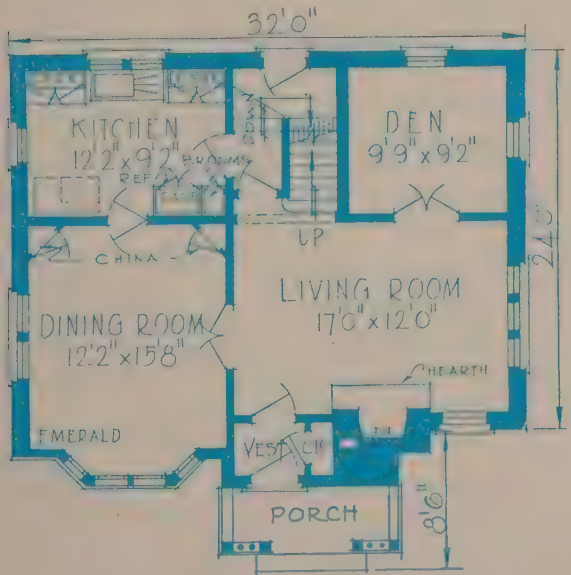
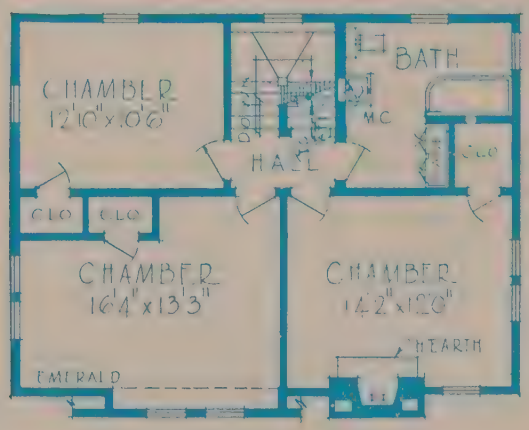
6 Rooms, Bath and Den

The EMERALD

A HOME embracing many materials in its multicolored exterior. Cream colored stucco with dark brown half timber, two tone red face brick and tan shingles on walls. Green shingled roof sets forth the complimentary red face brick chimney to good effect. A cheerful dining room, with bay, a den and natural fireplace in living room and one bedroom. Built-in conveniences in the kitchen include efficiency cabinets, broom closets, etc.





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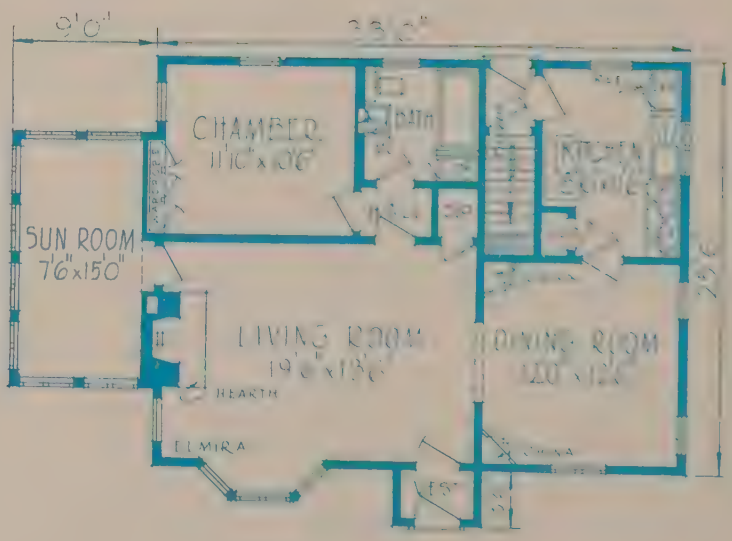
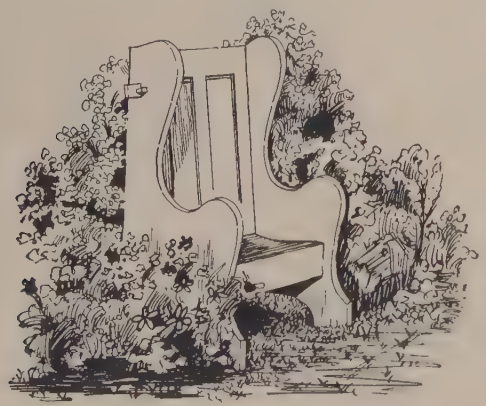
4 Rooms, Bath and Sun Room

The ELMIRA

THE BROWN and cream of thatched roof and siding walls make a delightful color combination. An exceptionally light and cheerful home with a natural fireplace in a large living room. Built-in bedroom wardrobe, dining room corner cabinets and convenient kitchen units are provided to give plenty of storage space.





A lawn or garden seat is a useful and ornamental piece of furniture.

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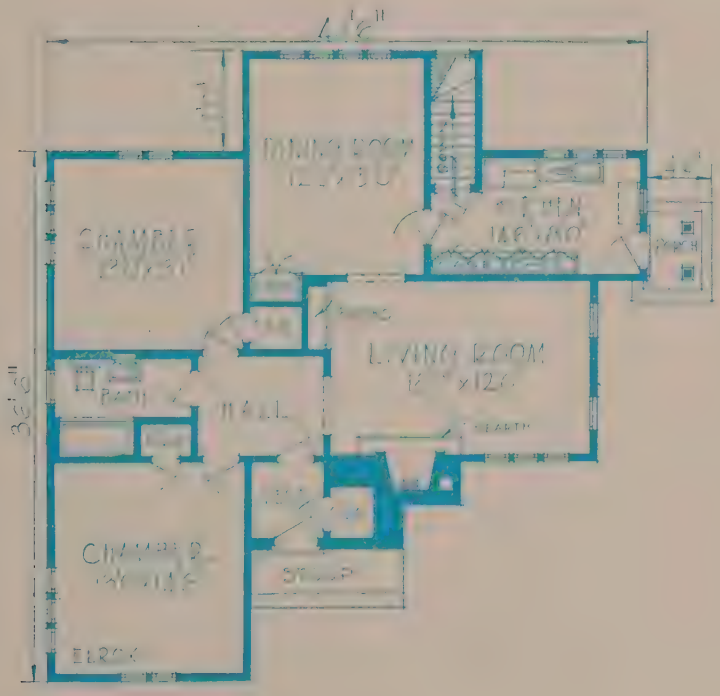
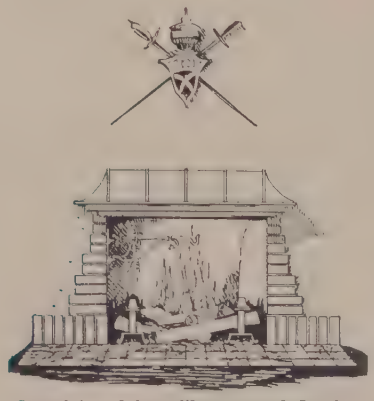
The ELROX

5 Rooms and Bath



STUCCO and shingled walls, stucco and brick chimney, and asphalt shingled roof form this pleasing exterior. Built-in kitchen conveniences, bookcases and a natural fireplace are included in the well planned interior.



Cheerful and homelike, a good fireplace is a real asset to every home.

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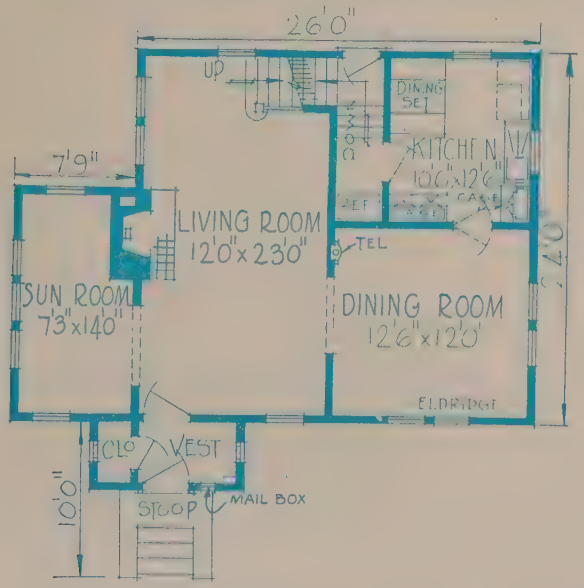
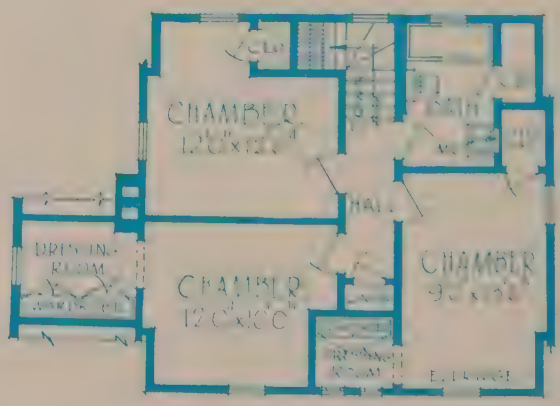
6 Rooms, Bath, Sun Room and Dressing Room

The ELDRIDGE

YELLOW siding and chocolate brown roof, shutters and window boxes make a pleasing color scheme, further enhanced by soft gray stucco panels at entrance. Interior plan includes a dressing room with built-in wardrobe for each of front bedrooms. A dining set and other features, including a mail box are among the many valued built-in conveniences.





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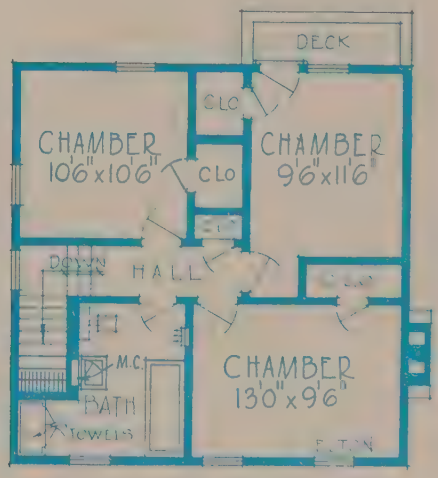
6 Rooms and Bath

The ELTON

SHINGLED walls, light brick chimney, two styles of shutters and a classic doorway give a two-toned effect to this exterior. Iron railings, lantern, knocker and chimney ornaments comprise the necessary decorations. Bookcases, dining set, kitchen units, bathroom cabinet and other built-in conveniences will bring unusual living comfort.



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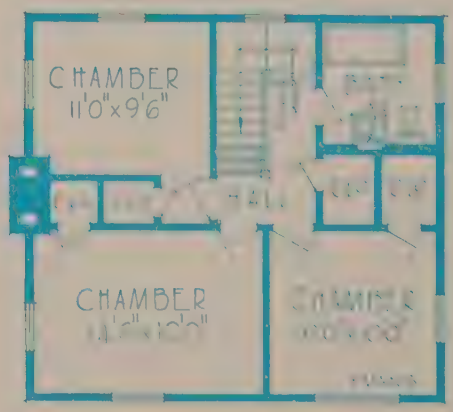
6 Rooms and Bath

The EVANS

THE expanse of shingled walls serves as an excellent background for the dark toned shutters, roof, and brick chimney. The decorative entrance leads through a vestibule and hall into a large living room with natural fireplace. Built-in kitchen conveniences and a well planned arrangement of rooms throughout are offered by this design.



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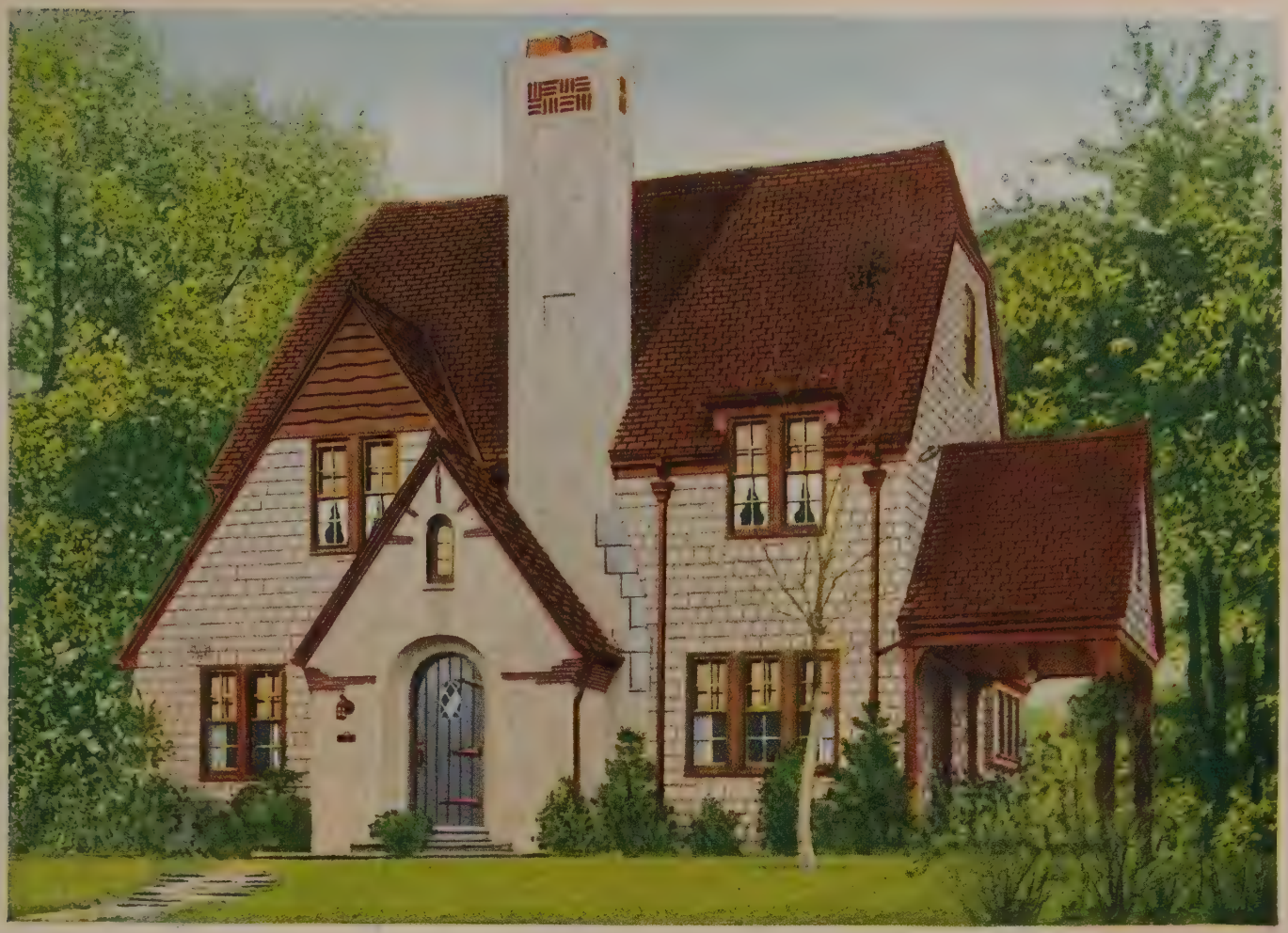
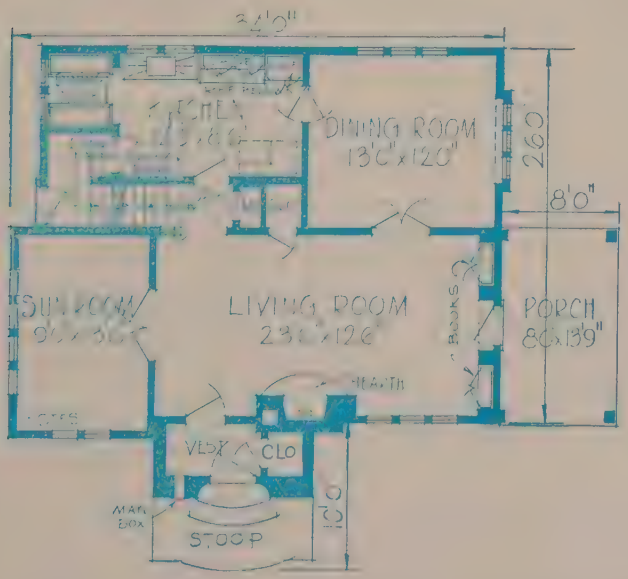
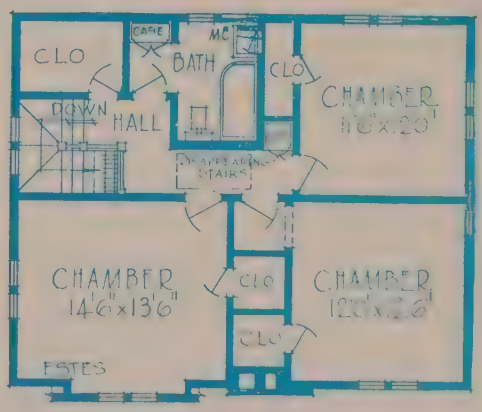


6 Rooms, Bath, Sun Room and Dining Nook

The ESTES

STUCCOED entrance and chimney with their harmonious decoration are pleasingly set forth by the gray shingled walls. Gable roof at left is nicely balanced by the interesting second floor window design on the right. Disappearing stairs, built-in dining nook, kitchen units, bookcases, a comforting fireplace are among the many conveniences.





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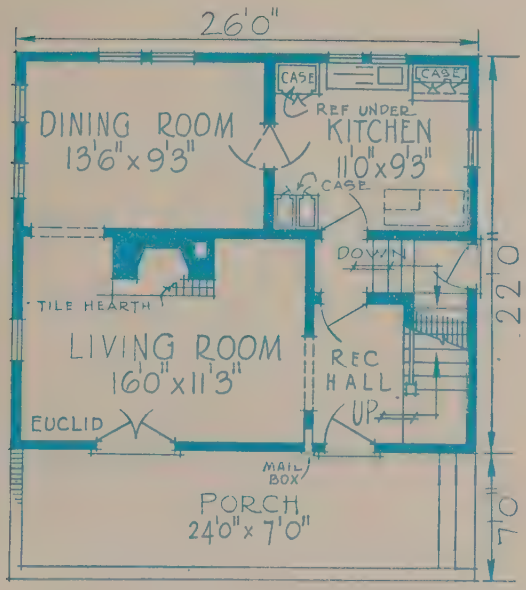
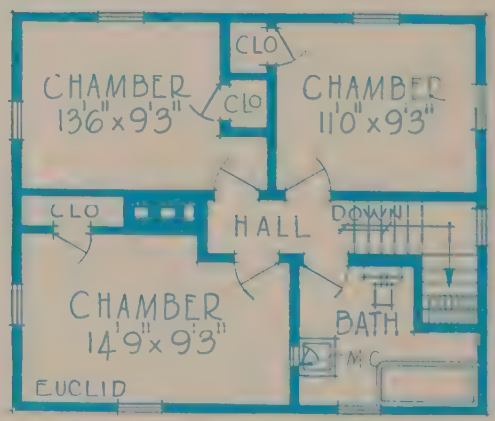
6 Rooms and Bath

The EUCLID

THE simple lines of this home are emphasized by the white siding walls and the restrained decoration. French windows and the entrance open onto a low open full width porch. The interior includes a natural fireplace in the living room, built-in conveniences including kitchen units and mail box. Note the splendid arrangement of rooms.





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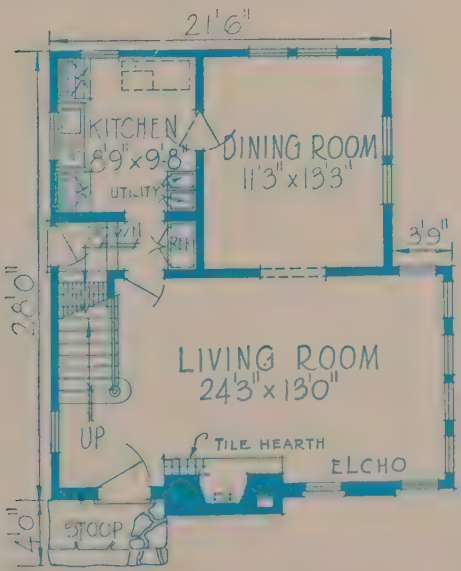
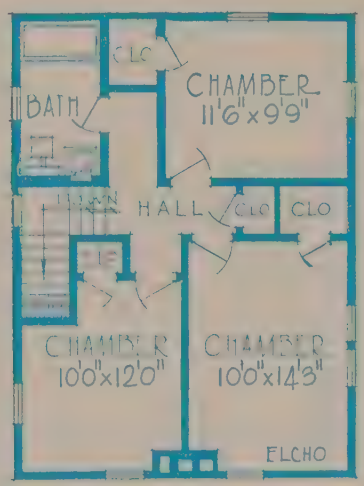
6 Rooms and Bath

The ELCHO

STUCCO, common brick and white siding combined make an unusual and attractive house. Heavy shutters, entrance door of same style and chimney ornament are appropriately designed and well placed. Dormers add interest to roof lines. Interior includes natural fireplace and built-in kitchen conveniences such as utility cabinets, and kitchen cases.





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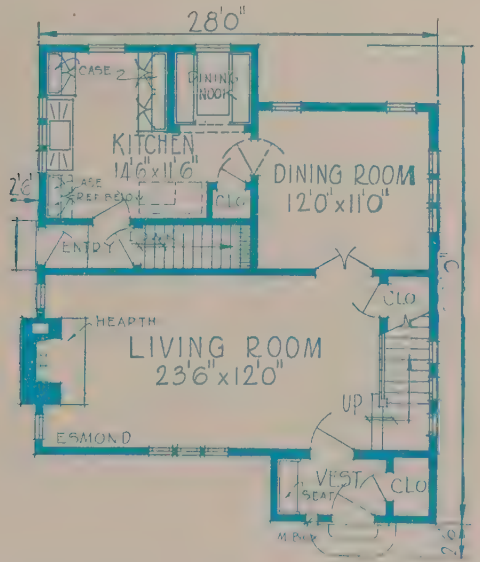
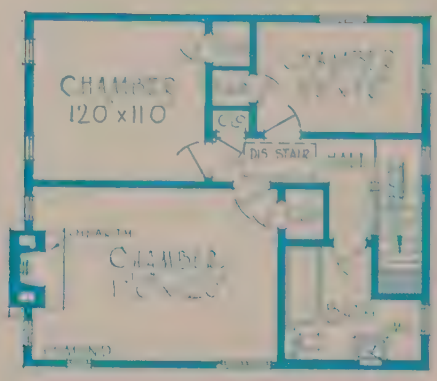
6 Rooms, Bath and Dining Nook

The ESMOND

THIS attractive home combines shingled walls with variegated shingle roof. Windows, chimney and entrance are pleasingly and symetrically planned. Built-in features include hall seat, dining nook, kitchen units, disappearing stairs and mail box. The large natural fireplaces in both living room and front bedroom will give additional cheer and comfort.





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6 Rooms, Bath, Sun Room and Dining Nook

The ECKLEY

GAMBREL roof and dormer windows form a roof of fine lines and excellent proportion. Shuttered windows contrast well with the light colored shingled walls. The sun porch roof is railed to provide a porch for one of the upstairs bedrooms. Dining nook and convenient kitchen units are built in. The natural fireplace is flanked on either side by doors leading from living room to sun room. All rooms are of good size and well planned.

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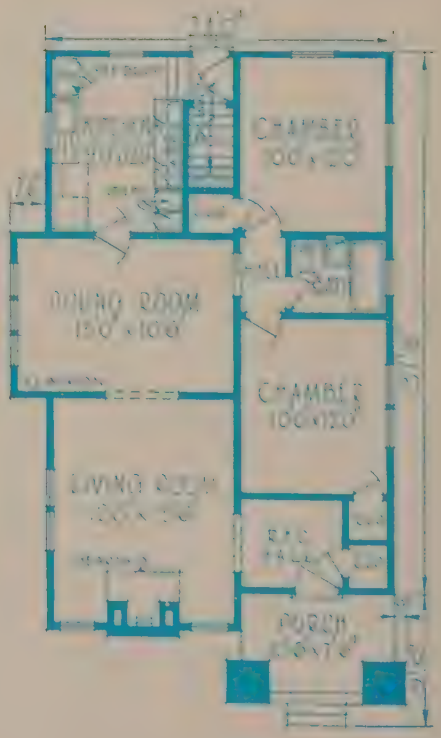
5 Rooms and Bath

The ELBERON

THIS is certainly an attractive home with its shingled walls, chimney of brick, and green thatched roof. Note the artistic entrance, the gracefully terraced lawn, the comfortable open porch. Then study the floor plan with its convenient arrangement of rooms, including the large bay window dining room.



A view of the built-in kitchen cabinets

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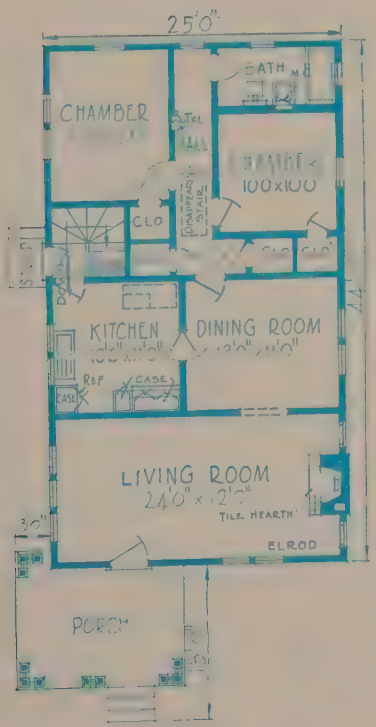
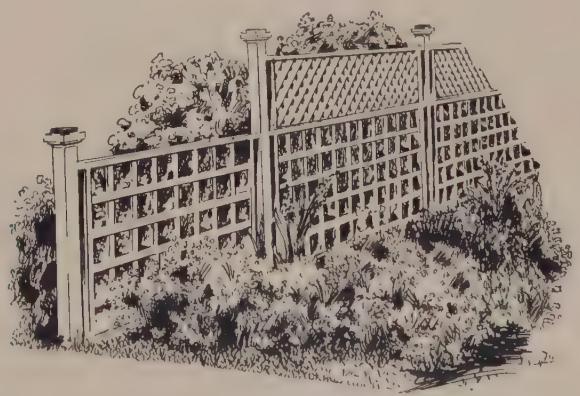
5 Rooms and Bath

The ELROD



A MODEST home of white siding on stone foundation with green shingled roof and green shutters. The red brick chimney and delicately designed porch impart a charm to this house that many homes costing many times as much fail to achieve. The natural fireplace, built-in kitchen units, telephone cabinet, medicine case and disappearing stairs give unusual efficiency and comfort.



This type of fence is a decorative addition to your grounds or garden.

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6 Rooms and Bath

The ELBERT

WHITE siding walls on stone foundation with shutters painted green, and green shingle roof make a pleasing color contrast. The entrance with its pediment top is a good adaptation of Early American architecture. French doors lead from the porch at the left into a good sized living room which has a natural fireplace. The well lighted interior is skillfully planned and contains built-in kitchen cabinets, ironing board and other conveniences. Note large linen closet. Side porch is convenient and pleasing.

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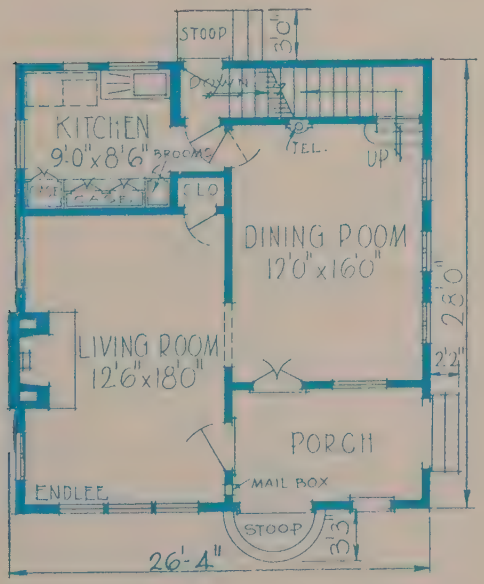
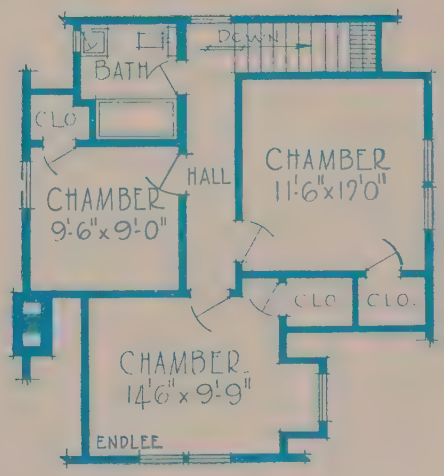
6 Rooms and Bath

The ENDLEE

STRONG color contrasts—light shingled walls; roof, exterior trim and brick foundation, dark. Two entrances into an enclosed porch and a gate at the left leads to a side-yard. The interior is arranged to the best advantage and includes many built-in conveniences.





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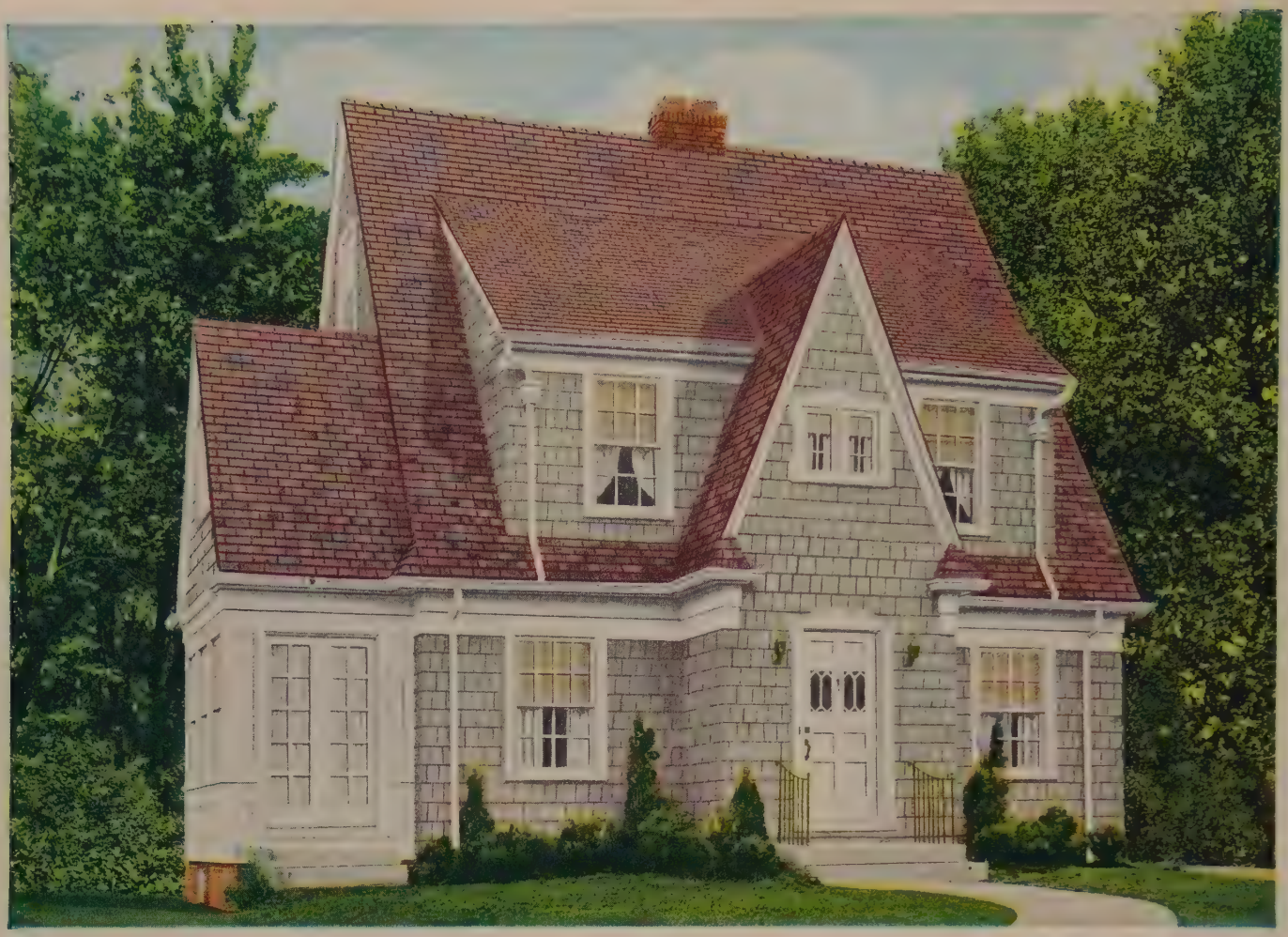
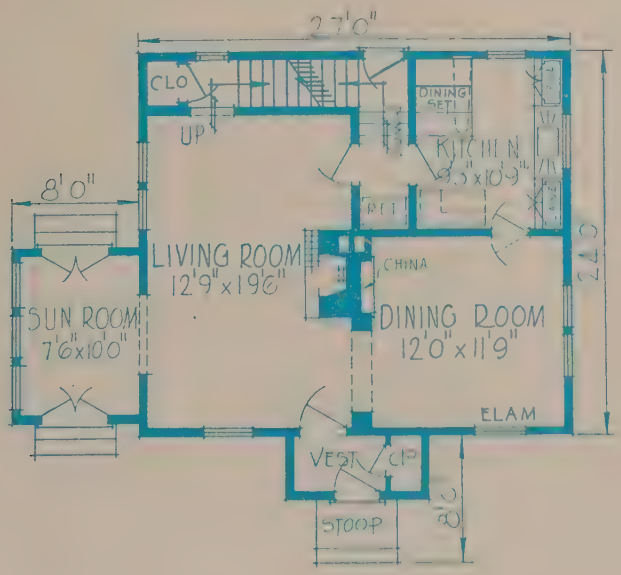


5 Rooms, Bath and Sun Room

The ELAM

AN INTERESTING arrangement with gable set into the dormer gives a pleasing and well balanced effect to this home. French doors at both ends of the sun room and a doorway of good design with iron railings. There is an ideally arranged efficiency kitchen.



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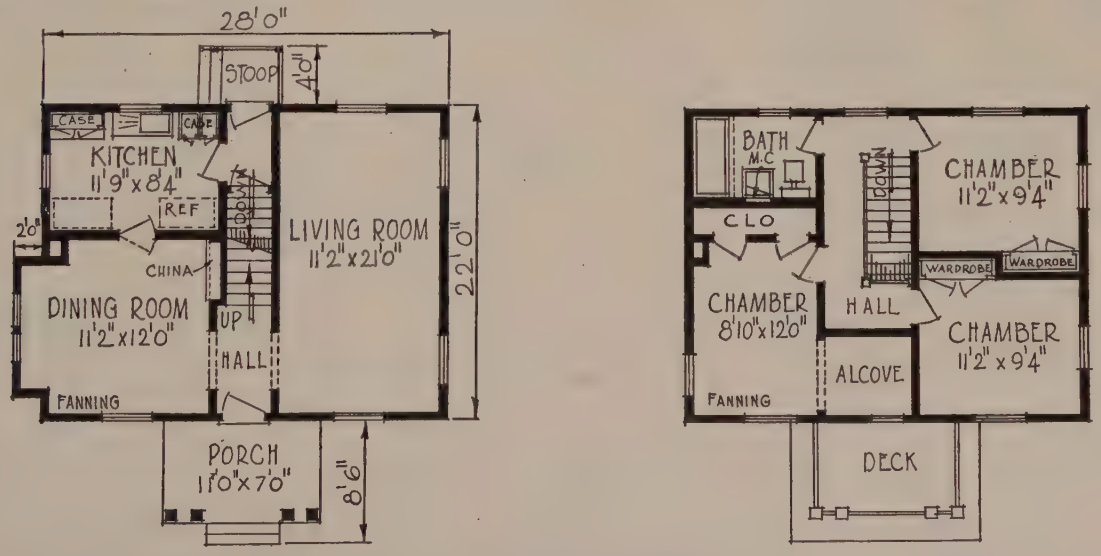
6 Rooms, Bath and Alcove

The FANNING

THE TRELLISED front porch adds much to the attractiveness of this white siding home with its conveniently arranged interior and numerous built-in features. Living room is large and there is a built-in china cabinet in the dining room and efficiency cabinets in the kitchen. Note the well arranged second floor, the built-in wardrobes, the alcoved bedroom and the modern bathroom. This type of colonial home is very economical to build.



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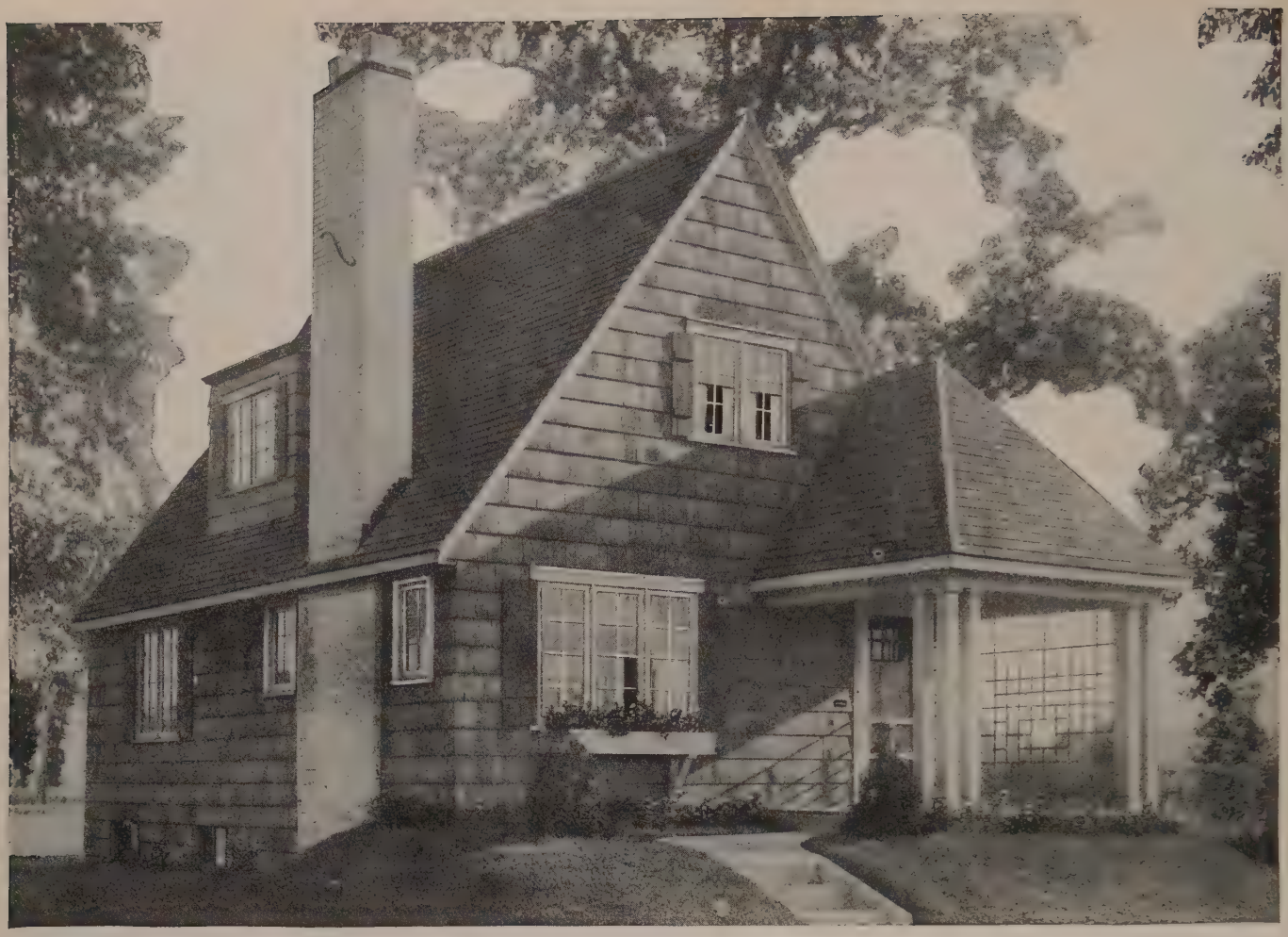
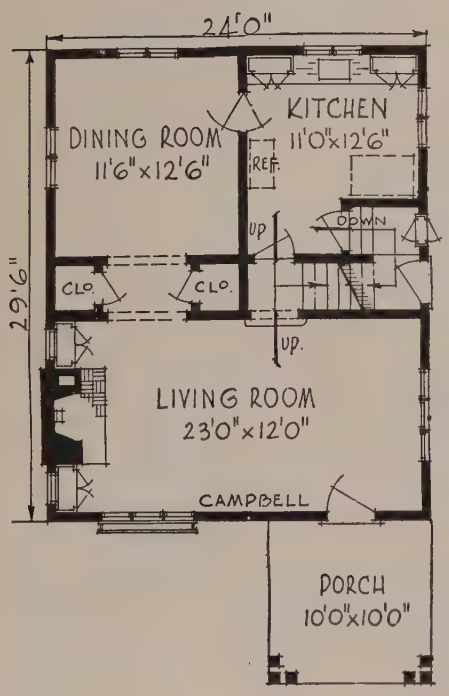
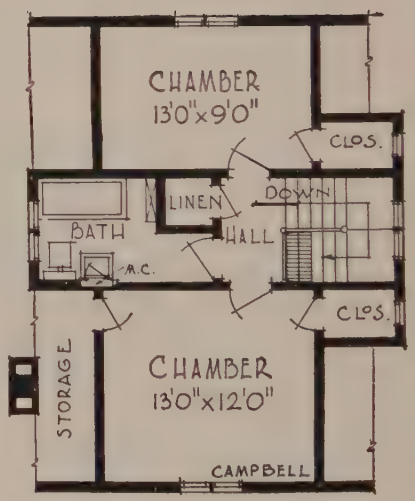


5 Rooms and Bath

The CAMPBELL



A SHINGLED home with an unusually attractive entrance, and a well planned interior remarkably convenient for easy housekeeping. An ideal home for small families that can be built for a very moderate investment.



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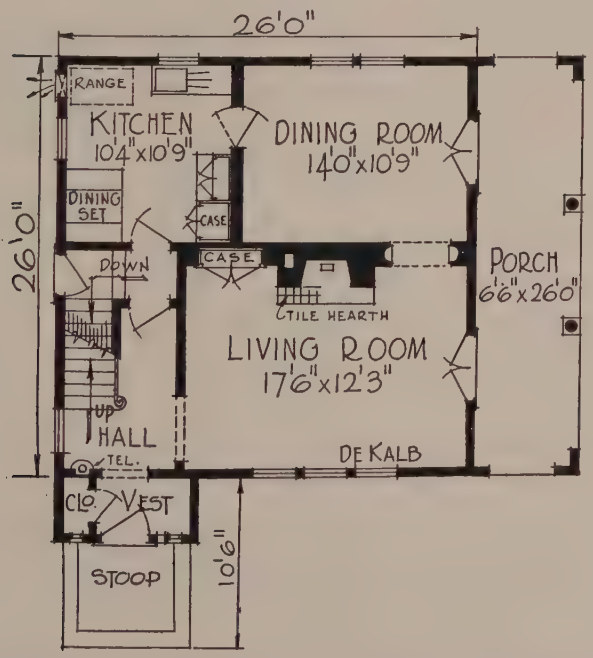
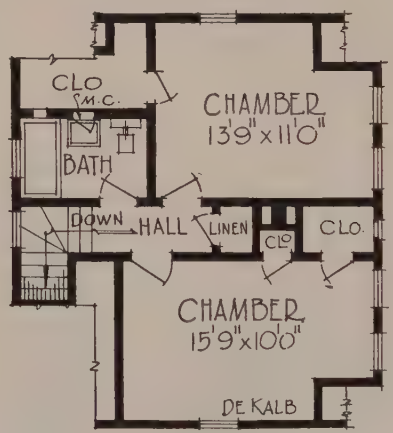
5 Rooms and Bath

The DeKALB

THE sweeping roof lines add much to the attractiveness of this home. In the well planned interior are found a model kitchen, with built-in dining set, a phone cabinet, book case and mail box. The large open porch will be much appreciated.





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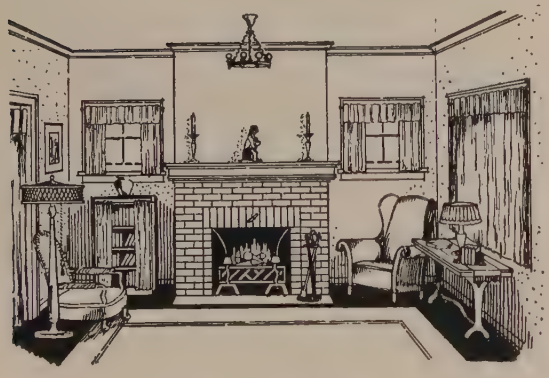
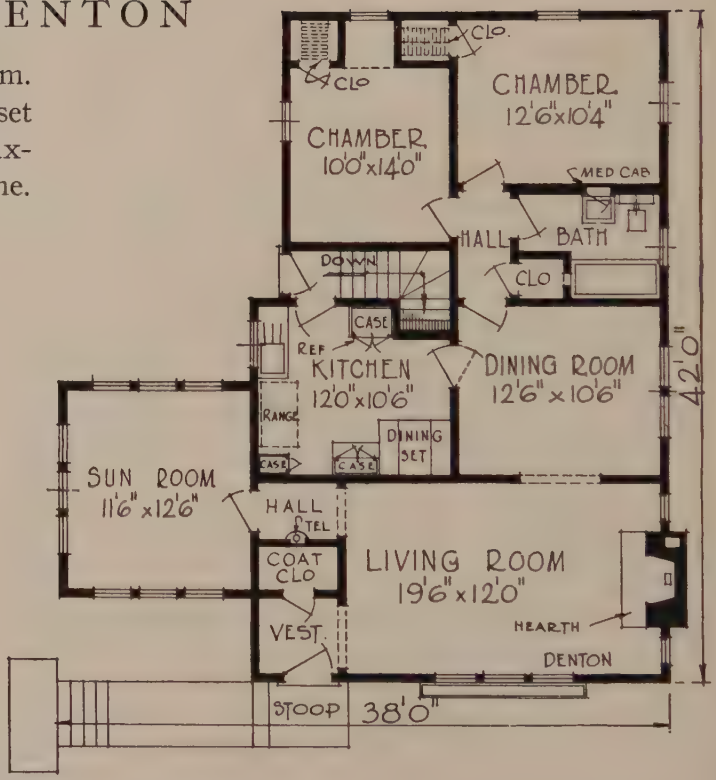
5 Rooms, Bath and Sun Room

The DENTON

A BUNGALOW of unusual distinction and charm. The modern efficiency kitchen, dining set and telephone cabinet, and adjustable closet fixtures make it an unusually complete little home.



View in Living Room



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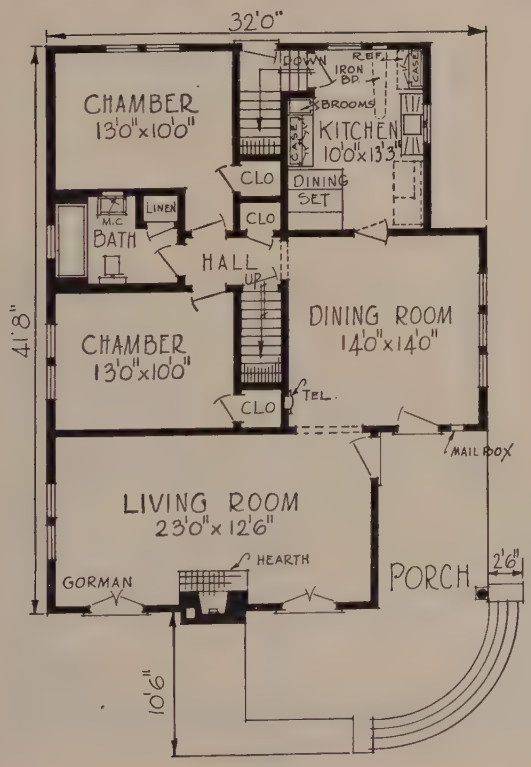
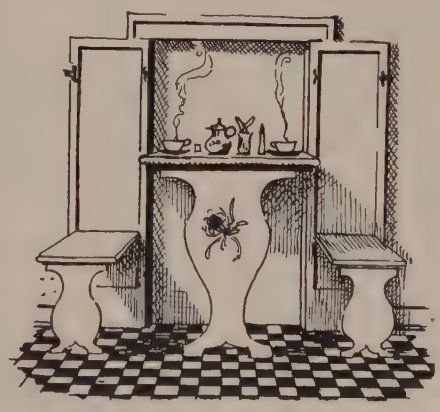
5 Rooms and Bath



The GORMAN

WHITE siding walls and shingled roof with an impressive looking chimney and a good sized porch help make this unusual yet attractive home. The large fireplace, built-in telephone cabinet, mail box, and the many built-in kitchen conveniences including a dining set are useful details of this carefully planned interior.



The dining set fits into a wall panel.

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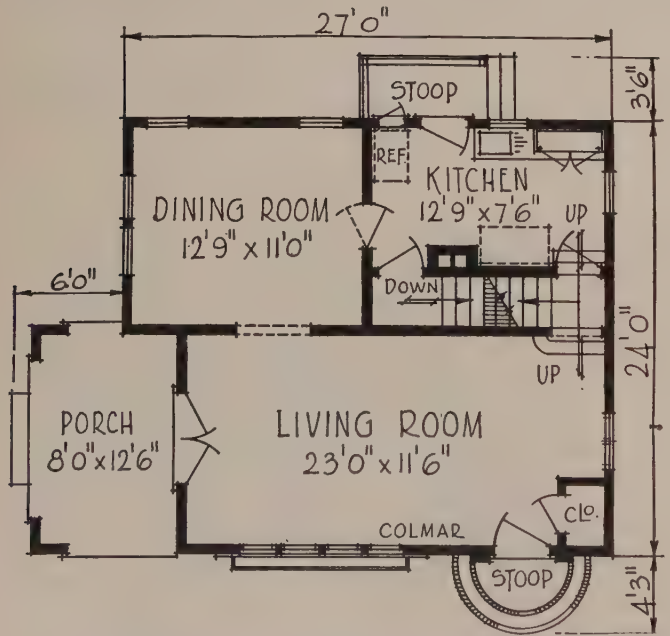
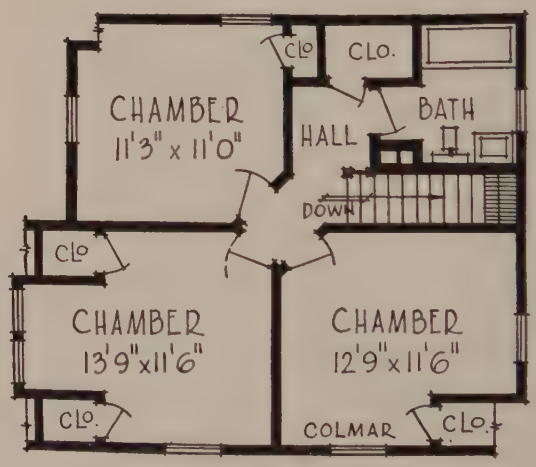
6 Rooms and Bath

The COLMAR

WELL GROUPED shuttered windows and shingled walls make this pleasing combination. The half circle brick stoop and iron railings help form a charming entrance. Floors are well planned, with large and comfortable rooms, and plenty of closet space.





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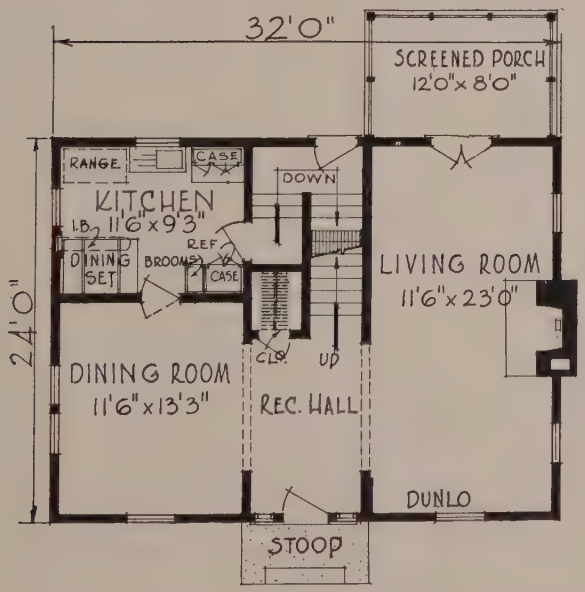
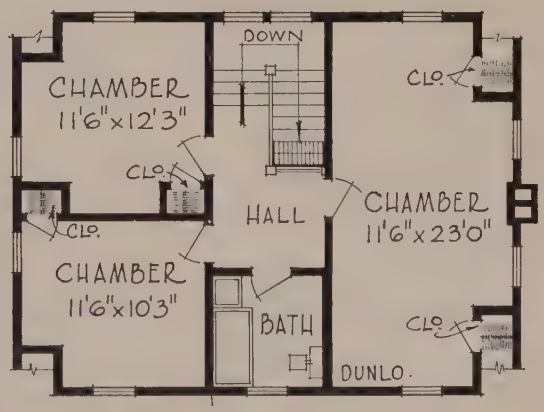
6 Rooms and Bath

The DUNLO

AN IDEAL home for the medium size family. There are three large chambers with ample closet space. The screened porch at back is well worthy of notice.





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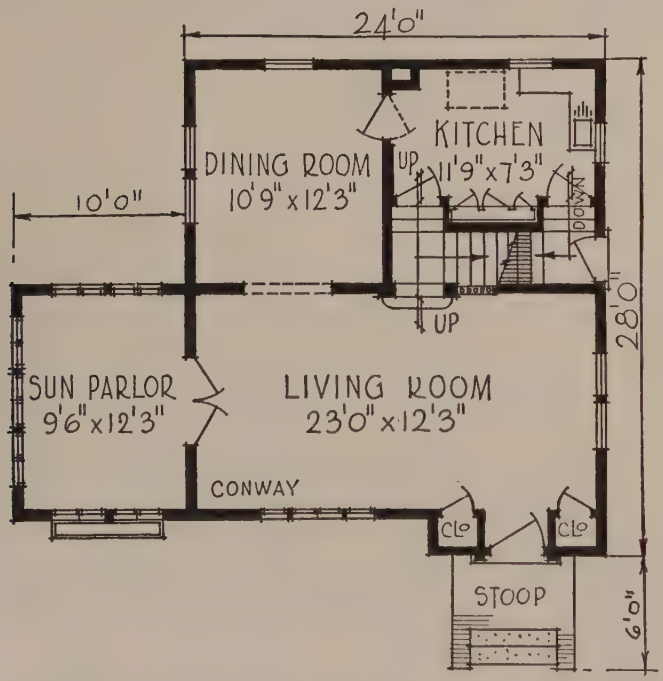
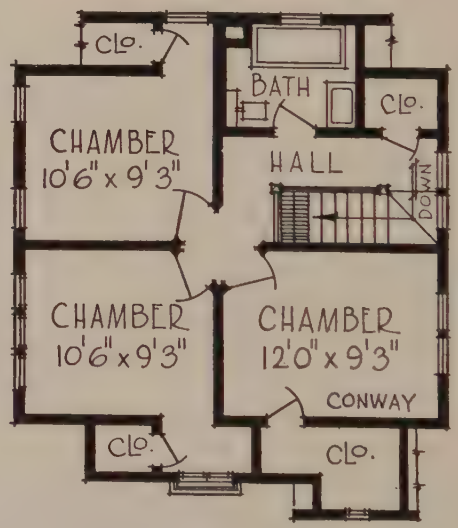
6 Rooms, Bath and Sun Parlor

The CONWAY

AN ATTRACTIVE home of shingle construction with well-grouped windows, a large living room and ample closet space. There are three large chambers upstairs.





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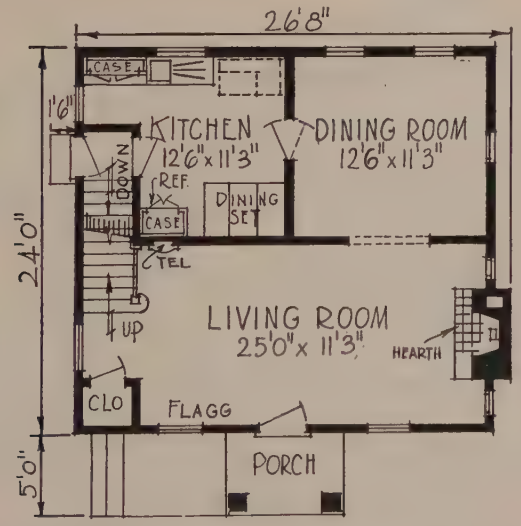
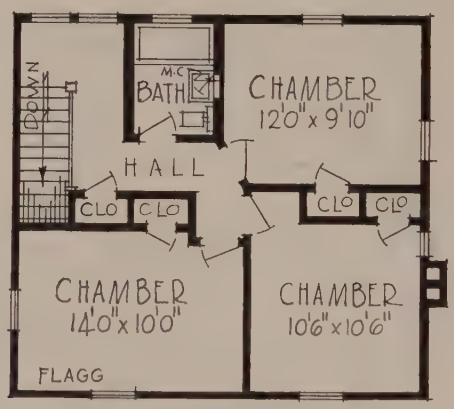
6 Rooms and Bath

The FLAGG

THIS home of shingles with asbestos roof offers much in living comfort and convenience as will be noted from the two floor plans. There is a large living room with fireplace and phone niche, a kitchen with built-in dining set and cabinets. Upstairs are three chambers, a bathroom and four closets. This home is compact yet roomy and can be built economically. This type of home is popular and offers maximum floor space.





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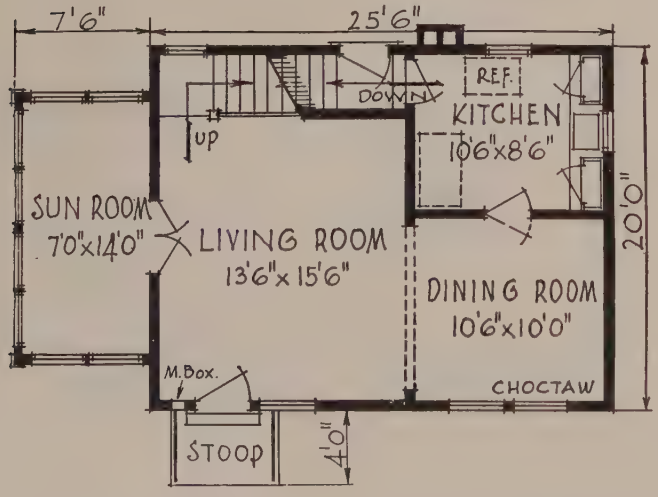
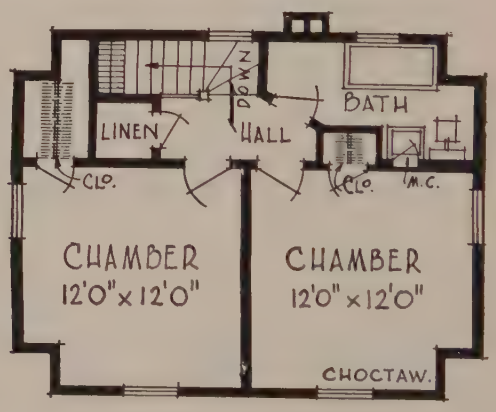
5 Rooms, Bath and Sun Room

The CHOCTAW

THE Dutch Colonial lends itself particularly well to small house construction. The shingled roof, shuttered dormer, and walls of siding present a very harmonious picture. The interior arrangement is ideally planned for convenience and comfort, and space-saving fixtures are used in closets. Rooms are large and there is a pleasant sun room connected to living room by French doors. There are two large chambers upstairs.





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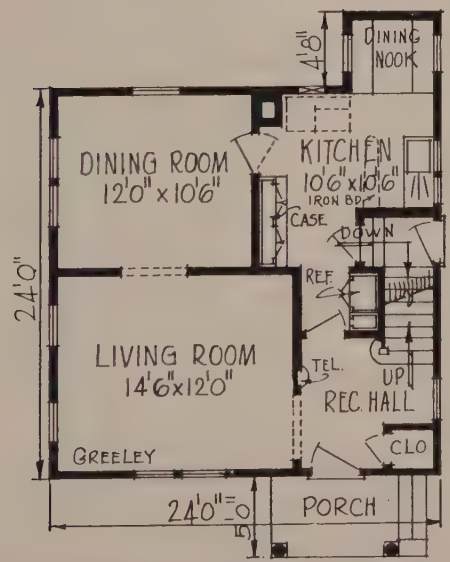
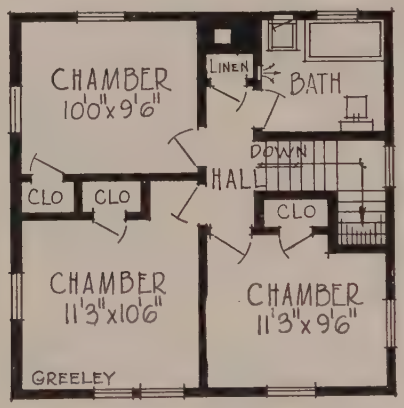
6 Rooms, Bath and Dining Nook

The GREELEY

A PLEASING home designed along simple lines. The attractive entrance is effective. The efficiency kitchen has built-in utility and ironing board cabinets and a dining nook. There is a built-in telephone cabinet in the reception hall. Upstairs there are three bedrooms, a large linen closet in the hall, a model bath and three large clothes closets.





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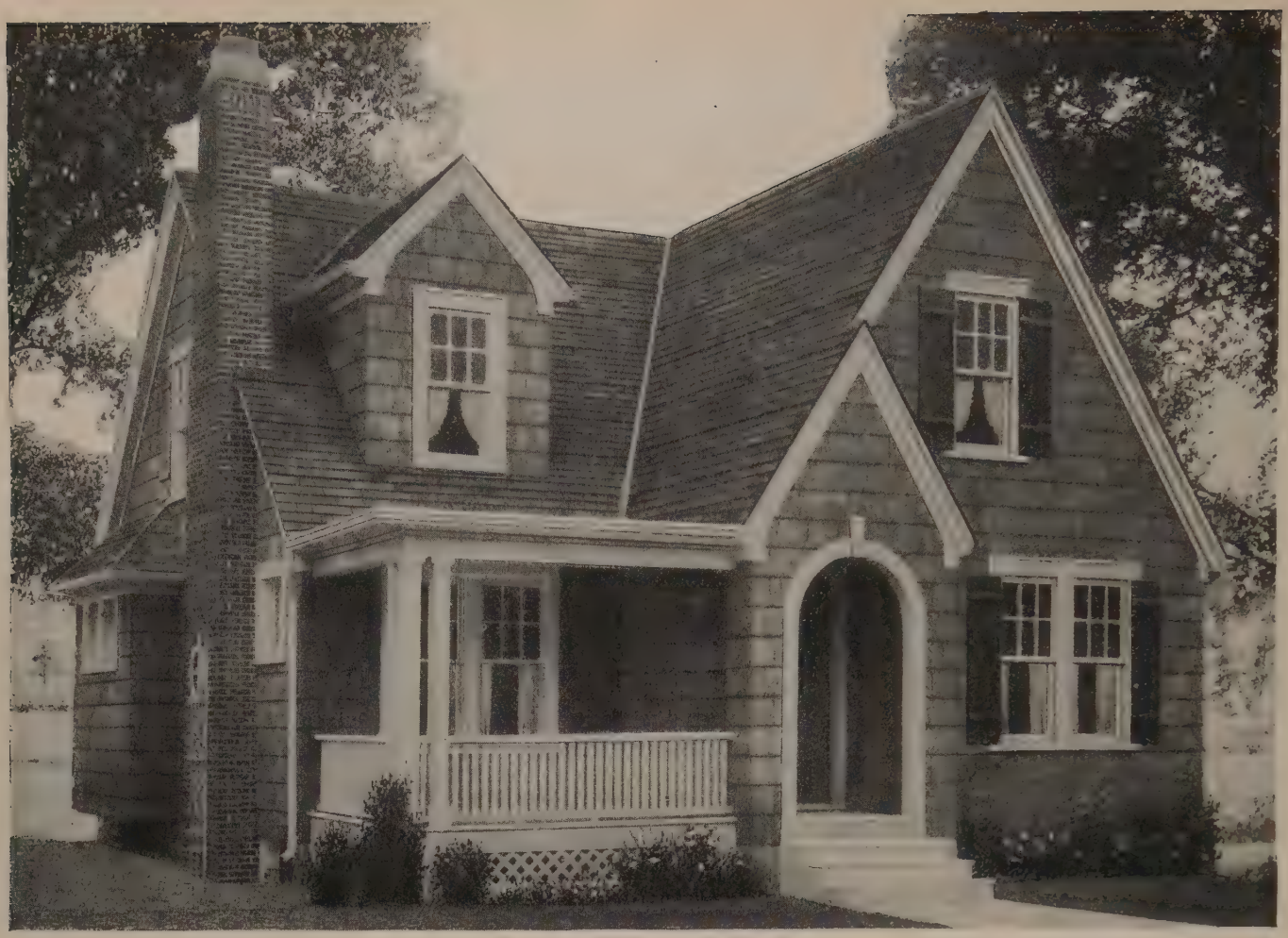
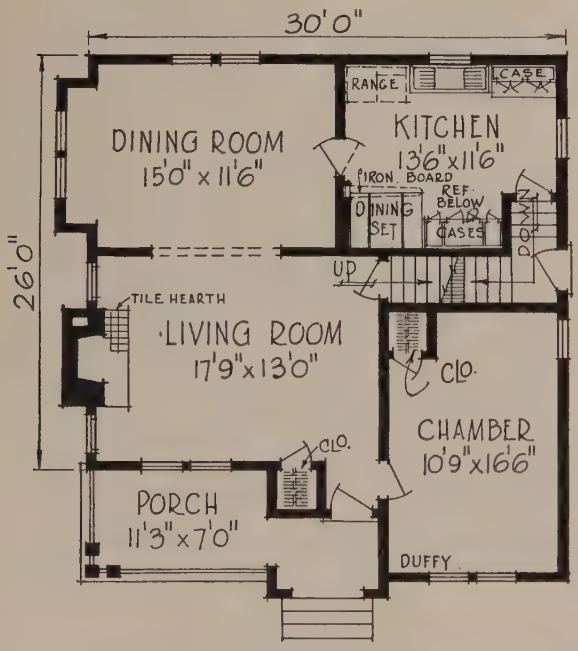
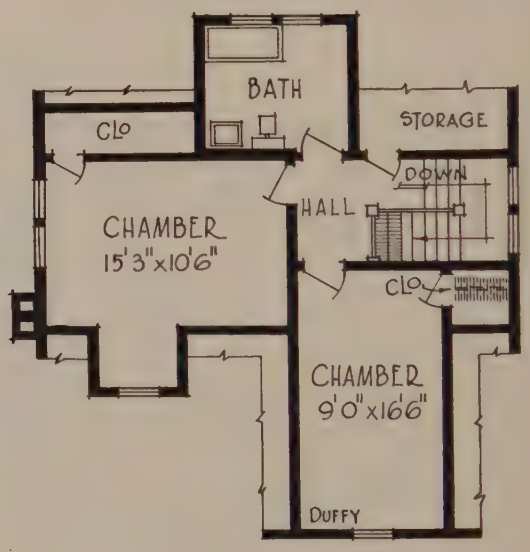


6 Rooms and Bath

The DUFFY

A SHINGLED bungalow with a cool, open recessed porch. Chambers are exceptionally large and airy. Ample clothes closet space, equipped with hangers, is provided.





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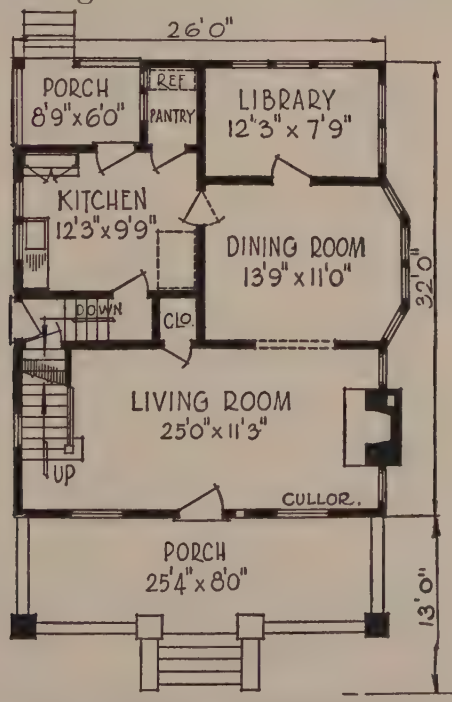
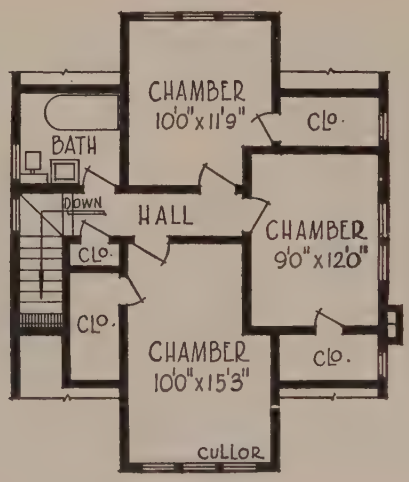
6 Rooms, Bath and Library

The CULLOR

A STORY and a half home that has a lot of character and living comfort. Shingles, siding and brick are combined harmoniously to create a very pleasing exterior.





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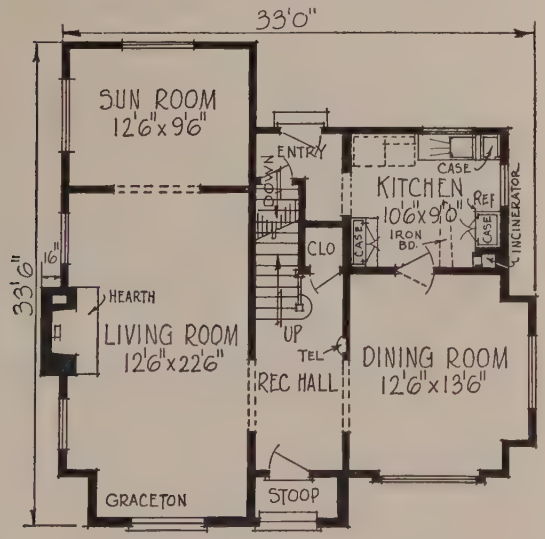
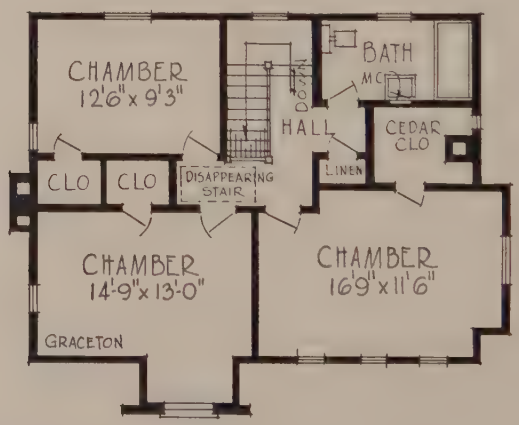
6 Rooms, Bath and Sun Room

The GRACETON

AN UNUSUALLY attractive home of random laid shingles, with stucco and brick combined for gable. There is an exceptionally pleasing grouping of windows and an inviting entrance. Inside there is a splendid arrangement for both floors. First floor plan shows a large living room with fireplace, an adjoining sun room, a utility kitchen with built-in conveniences including an incinerator. There is a telephone cabinet in reception hall. Upstairs rooms are large and there is a disappearing stairway to attic.





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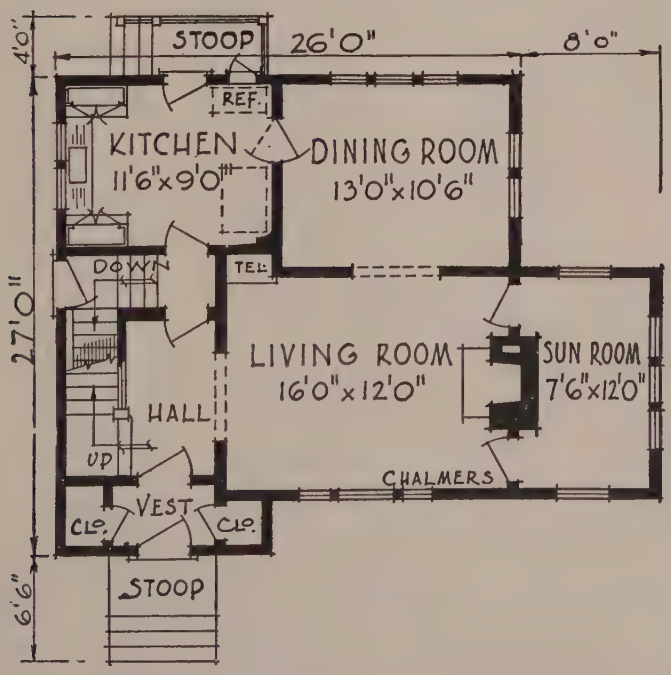
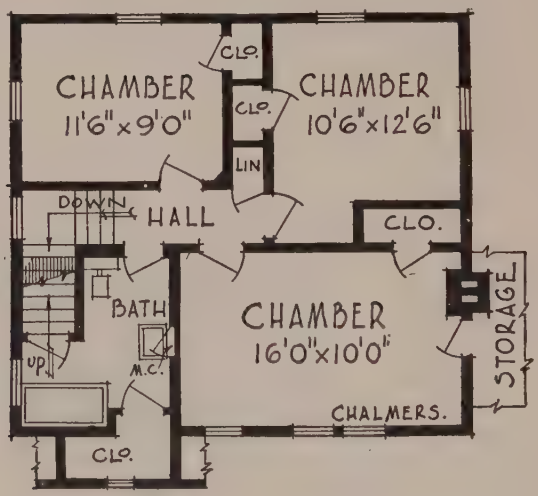
6 Rooms, Bath and Sun Room

The CHALMERS

AN ATTRACTIVE home, in which shingles are used for walls, on a brick foundation. Built-in phone cabinet and ample closet space are included in the conveniences.





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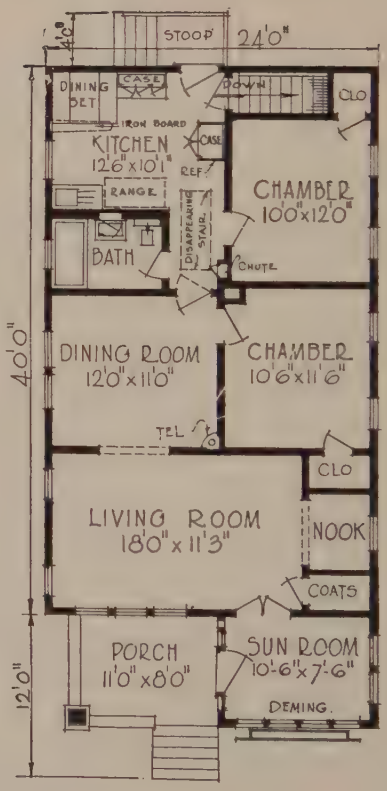
5 Rooms, Bath and Sun Room

The DEMING

AN IDEAL bungalow for a narrow lot. The walls are of siding, the roof of asphalt shingles. A disappearing stairway gives easy access to the attic. A clothes chute, mail box, dining nook are among the many convenient built-in features.

Interior of Living Room



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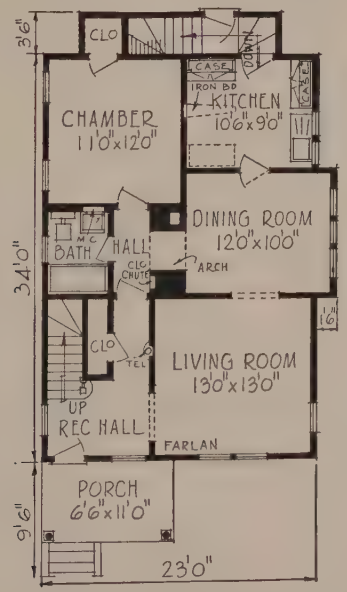
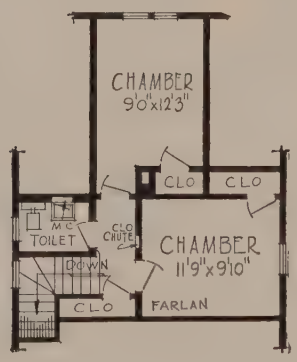
6 Rooms, Bath and Toilet

The FARLAN

HERE is a pretty little home that has two comfortable sleeping rooms on the second floor. Rooms are of comfortable size and well arranged. There is a complete bathroom downstairs and a toilet and lavatory on the second floor. A built-in clothes chute serves both floors. The kitchen is arranged for built-in cabinets and ironing board.





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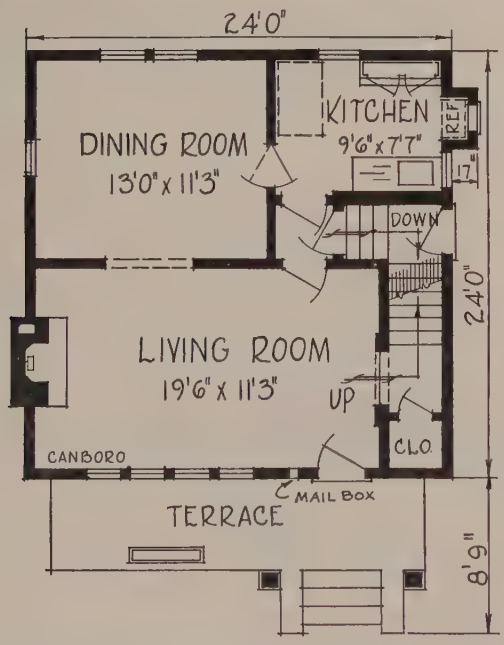
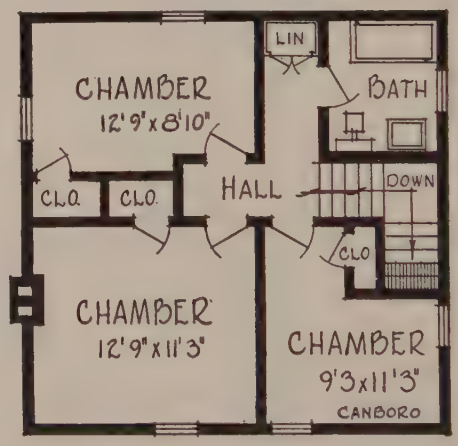
6 Rooms and Bath

The CANBORO

AN ATTRACTIVE home of simple but pleasing style that never grows tiresome. Rooms are well arranged to give the utmost in convenience and unusual living comfort.





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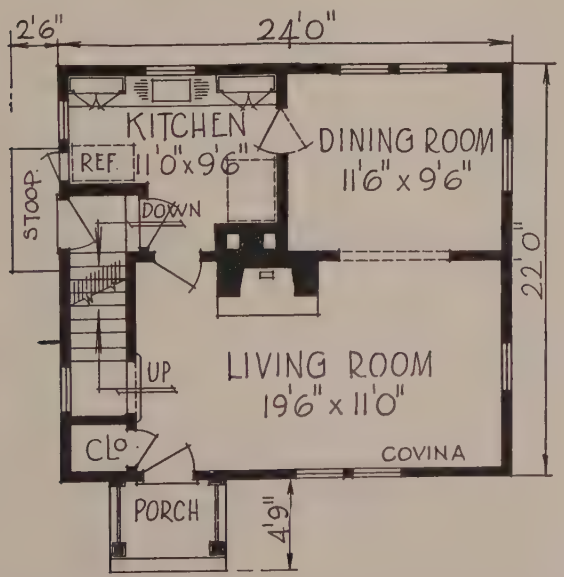
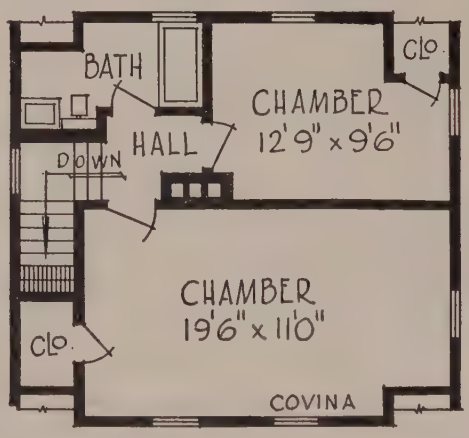
5 Rooms and Bath

The COVINA

A SPLENDID example of the Dutch Colonial on a small scale that enjoys all the roominess that this style of home affords. The first floor is exceedingly well planned and there are two large chambers upstairs, with bath and two large closets.





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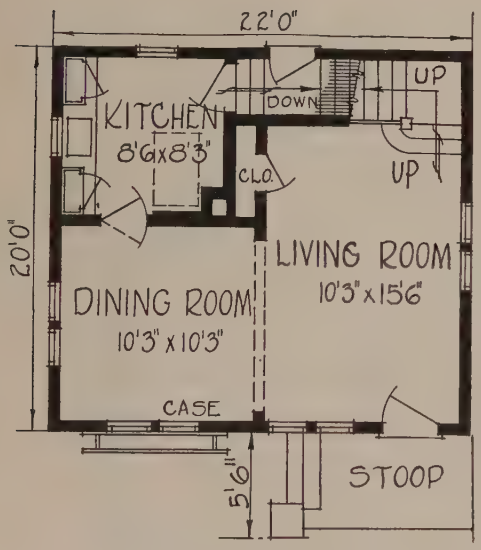
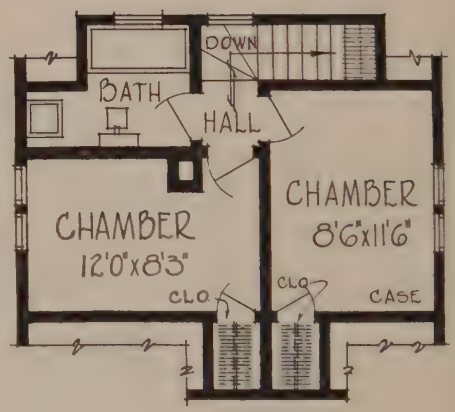
5 Rooms and Bath

The CASE



THE stuccoed gable ties together in perfect harmony the roof of asphalt shingles and the walls of siding. A disappearing bed can easily be installed in the living room in a closet conveniently planned for that purpose, thus creating an extra or emergency bedroom.



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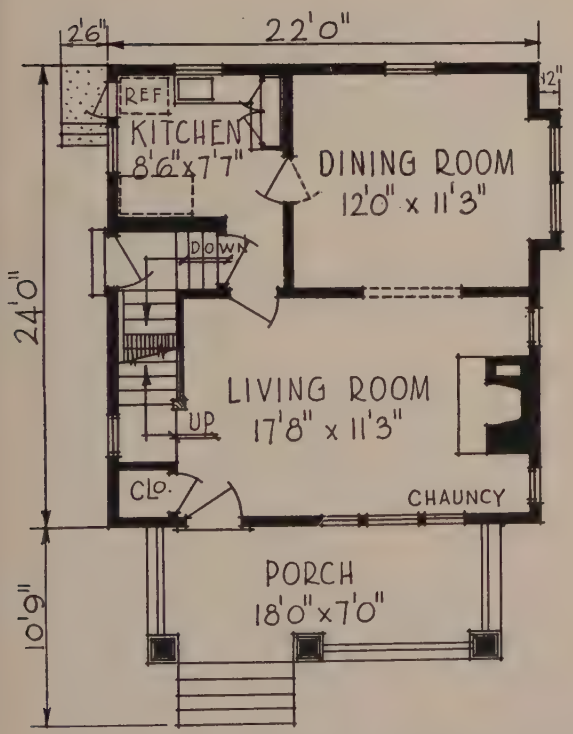
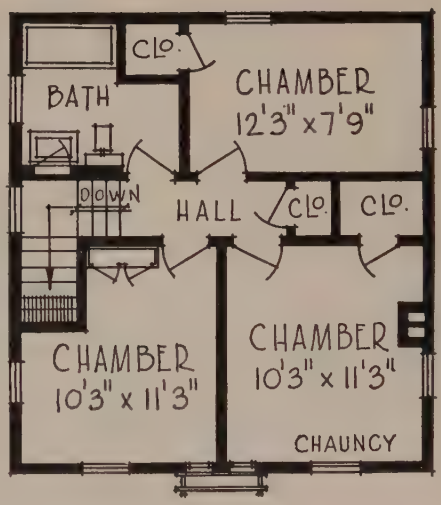
6 Rooms and Bath

The CHAUNCY



A COMPACT home carefully planned to avoid waste of room space. Rooms are comfortably large, yet the whole atmosphere is one of comfortable coziness and convenience. An ideal home that can be constructed with a very modest outlay.



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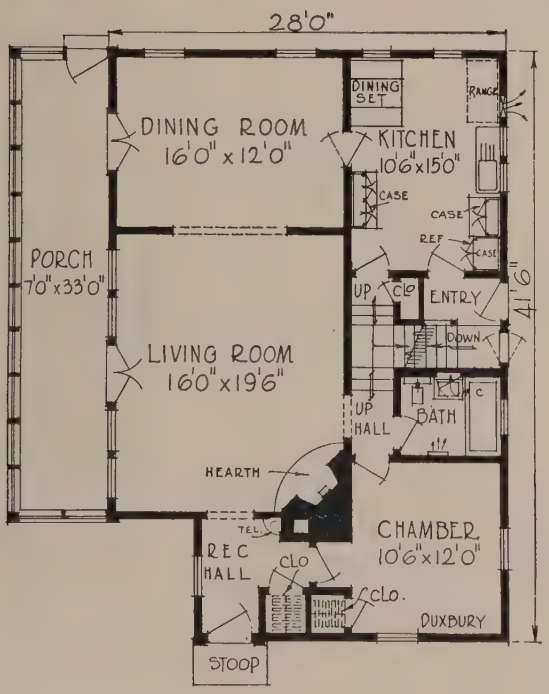
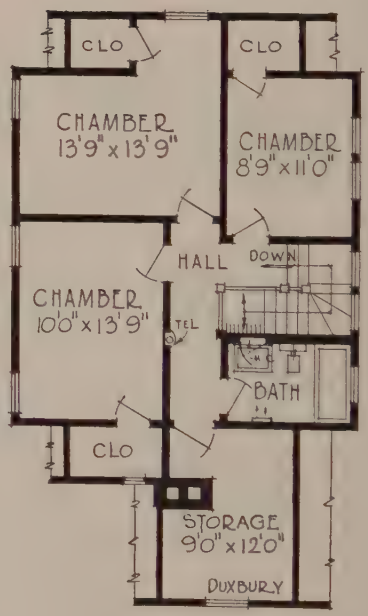
7 Rooms, 2 Baths and Storage



The DUXBURY

THE attractiveness of this home is further accentuated by the use of colored shingles for walls. The large glazed porch will be a welcome spot all the year round. The carefully planned interior is worthy of more than passing notice.



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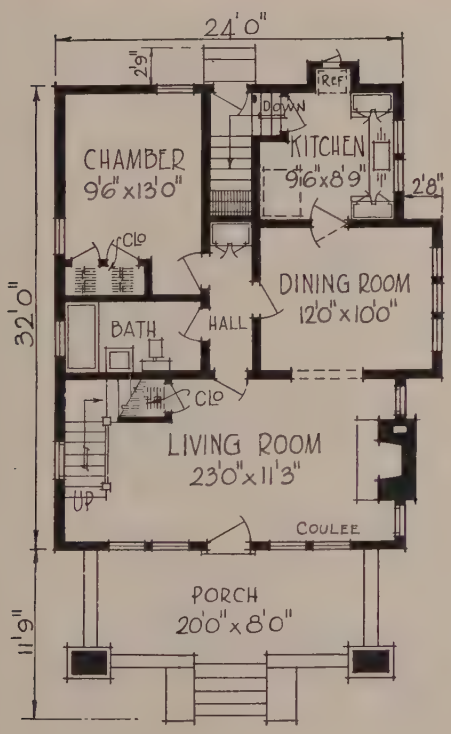
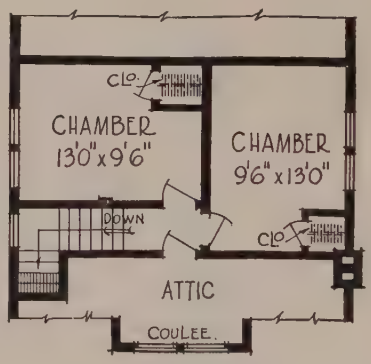
6 Rooms and Bath



The COULEE

THE striking porch gives this story and a half home an impressive appearance. There is an attic room on second floor for storage and two large sleeping rooms. The bathroom is on the well arranged first floor which includes a third chamber. Adjustable clothes hangers are among the convenience features.



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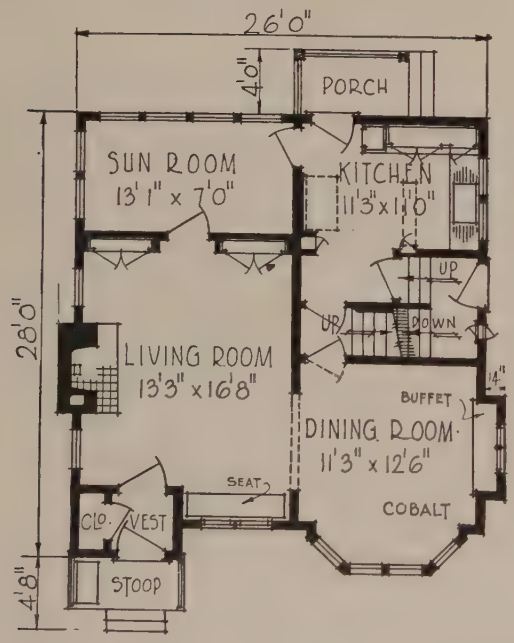
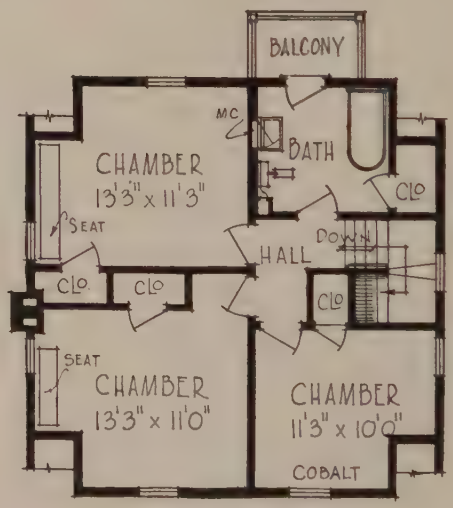
6 Rooms, Bath and Sun Room

The COBALT

A SMALL modern home built on Dutch Colonial lines, with shutters that set off the dormer windows to advantage. Inside, the rooms are ample in size, yet cozy, and conveniently arranged. There is a rear porch off the kitchen, and numerous closets.





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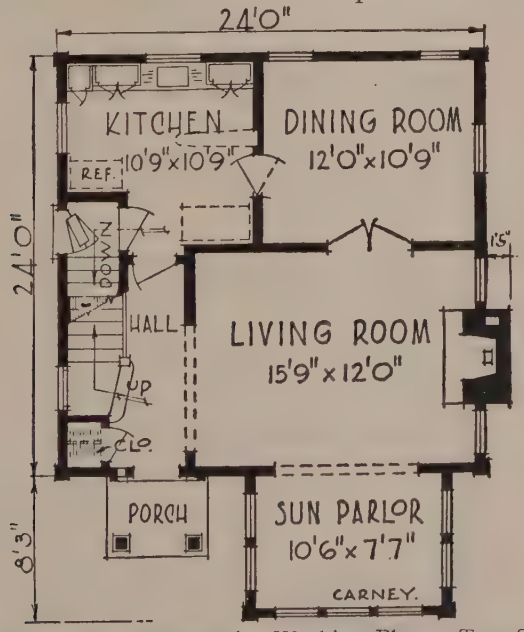
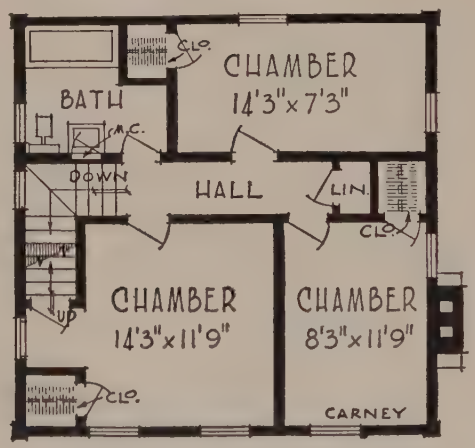
6 Rooms, Bath and Sun Parlor

The CARNEY

THE dark shutters bring color contrast to the exterior of white siding in this excellent example of New England Colonial architecture. Disappearing attic stairway, rear door delivery receptacle and built-in features are found in the conveniently planned interior. Rooms are of ample size with three chambers on second floor.





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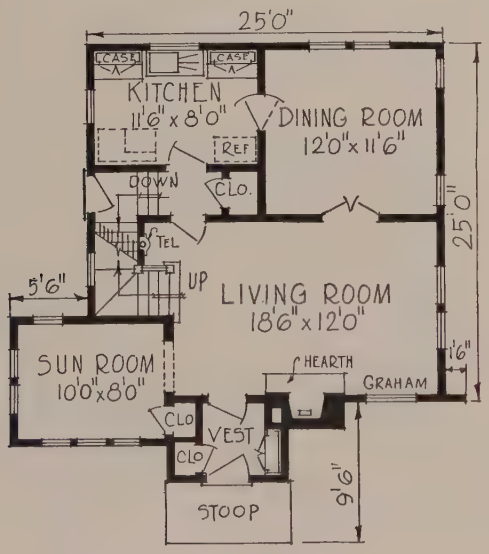
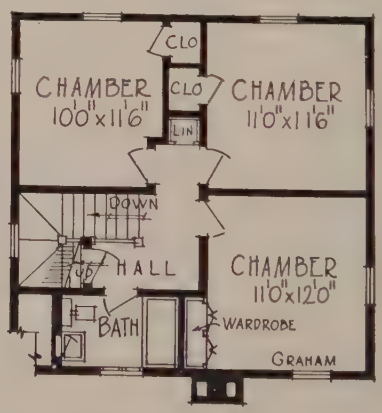
6 Rooms, Bath and Sun Room

The GRAHAM

THE white trim on windows, entrance and at the eaves is pleasing against the shingled walls of this home. The chimney of brick and the brick porch also tone in nicely. The interior arranged for convenience and comfort contains many useful built-in features, telephone cabinet, kitchen cases, linen closet, and a convenient built-in wardrobe.





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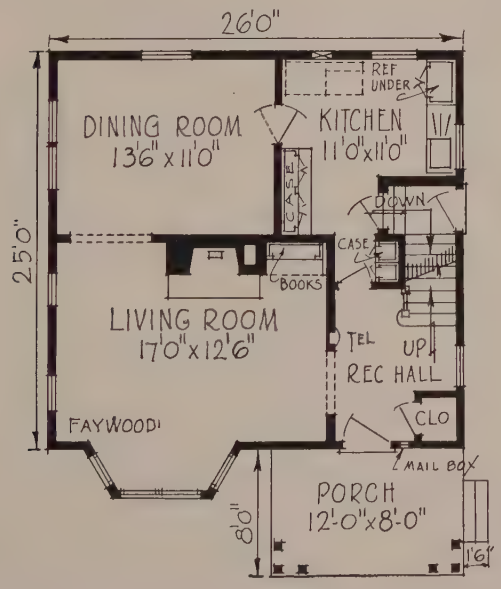
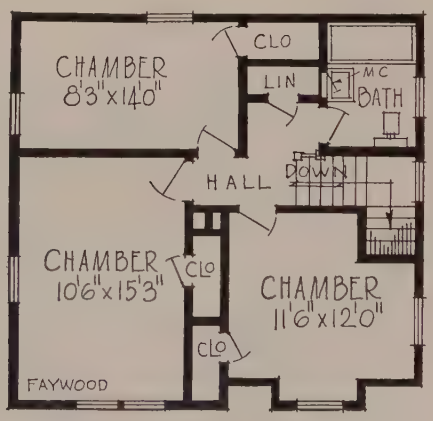
6 Rooms and Bath

The FAYWOOD

HERE is a home of shingle construction that offers much in living comfort and convenience. The living room has bay window and built-in book case. There is a telephone cabinet and built-in mail box, and an efficiency kitchen. Upstairs there are three chambers and a bath, and plenty of closet space. Notice the porch with steps at side.





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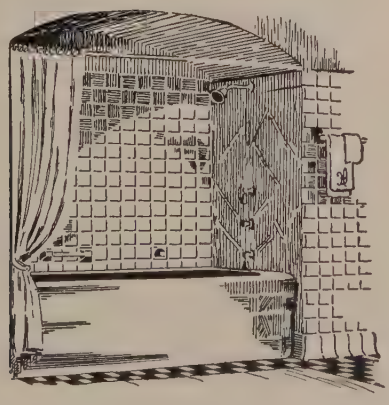
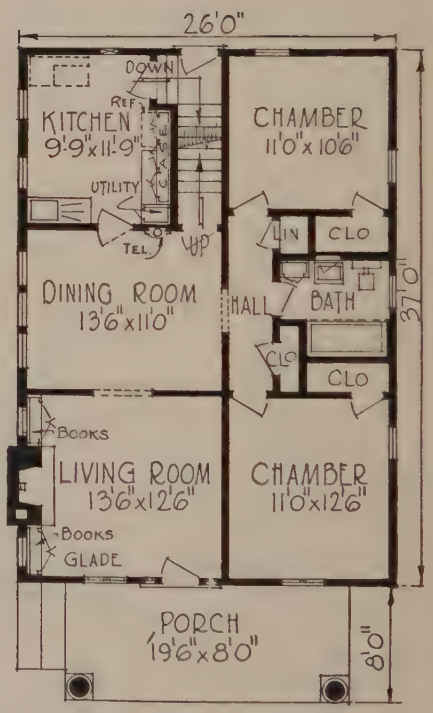
5 Rooms and Bath

The GLADE

SHINGLED walls are well set off by the white trim, eaves, and porch columns and by the leaded glass at the front windows and entrance. Book shelves at each side of the living room fireplace, telephone cabinet in dining room, and cabinets in the kitchen are built-in. The large front porch is inviting.



The attractive bathroom has the tub in an alcove.



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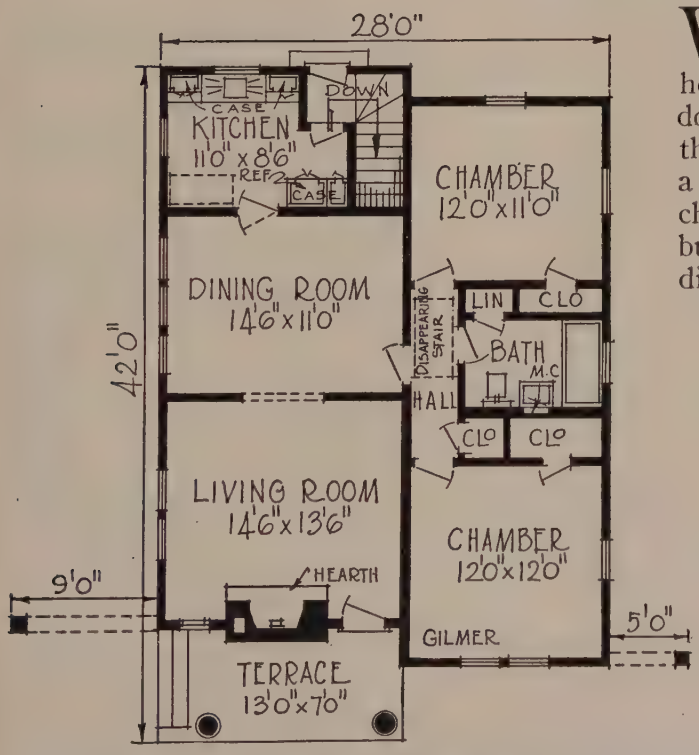
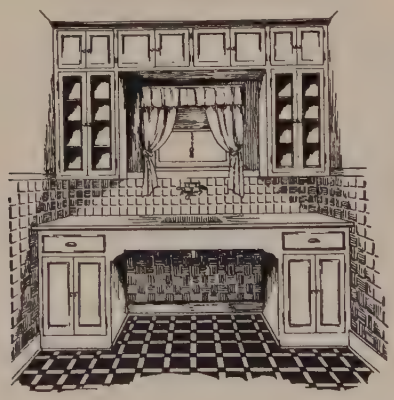
5 Rooms and Bath

The GILMER



WHITE siding and a massive chimney, with brick trim are harmoniously used for this home. The lines of roof at right and left slope downward and end in attractive archways. Note the unique treatment of the entrance. There is a large terrace, a fireplace in living room, a kitchen with built-in features, a model bathroom with built-in linen closet, and two large chambers. A disappearing stairway leads to attic.



Portion of kitchen showing a built-in cabinet and comfort-high sink

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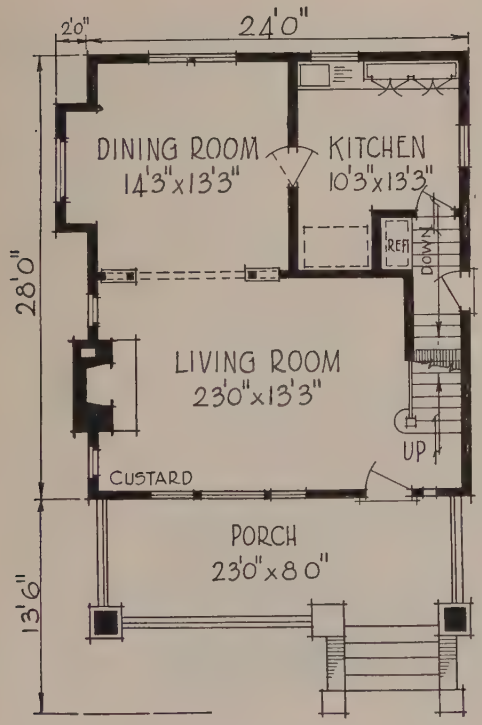
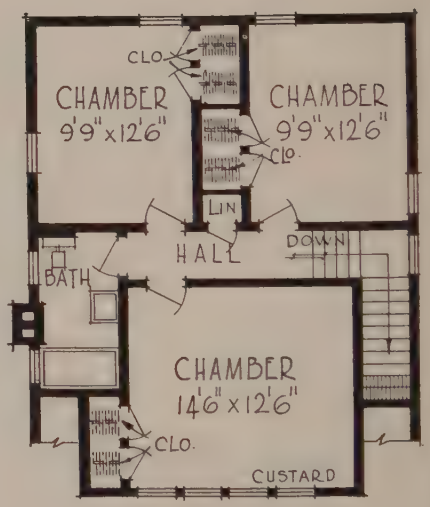
6 Rooms and Bath

The CUSTARD



A POPULAR type of home that wears well. Brick, siding and shingles are harmoniously combined to create a pleasing exterior. An attractive dormer breaks through the expanse of downward sweeping roof. There is a well planned interior, ideally arranged for the convenience and comfort of the family.



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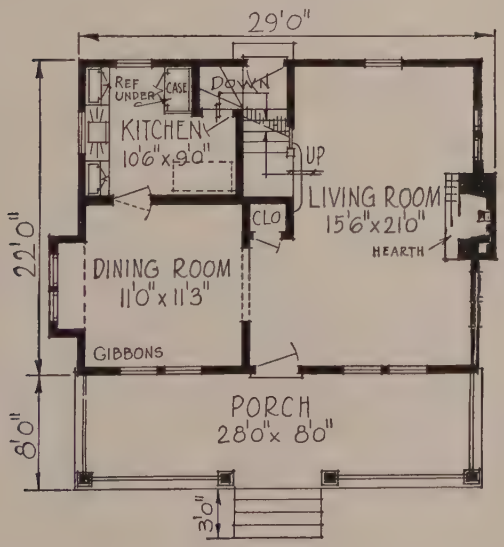
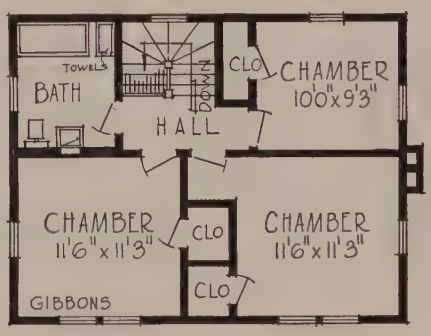
6 Rooms and Bath

The GIBBONS

A HARMONIOUS blending of shingles and siding form the exterior of this home. There is a large open porch, and windows are well grouped. Rooms are of good size, the living room extending the full depth of the house. The kitchen has built-in cabinets. Upstairs there are three chambers with closets and bathroom with built-in towel cabinet.





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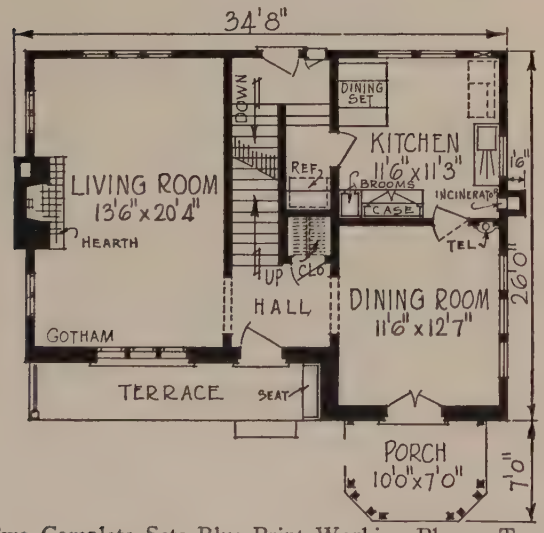
6 Rooms, Bath and Alcove

The GOTHAM

STONE and shingles have been effectively combined to produce pleasing walls of this tastefully designed home. The delicate porch columns, quaint porch seat, well proportioned door, and the trellis at one end of the terrace harmonize with the general character and period style of the architecture. A living room fireplace, built-in dining room telephone cabinet, built-in dining set and cabinets in the kitchen, and an incinerator for easy and sanitary disposal of garbage are a few of the desirable details of this home.



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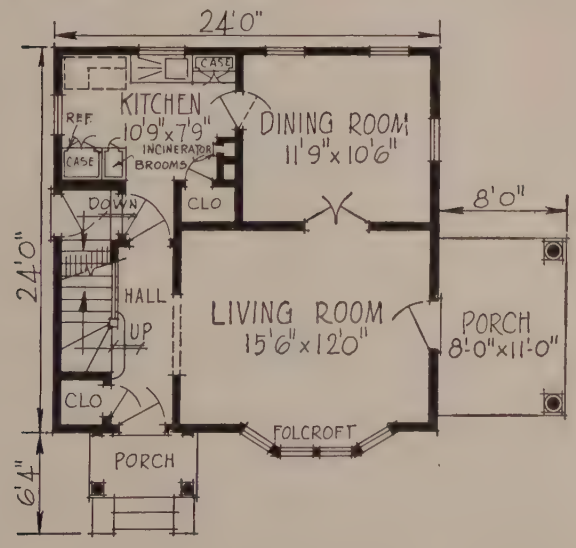
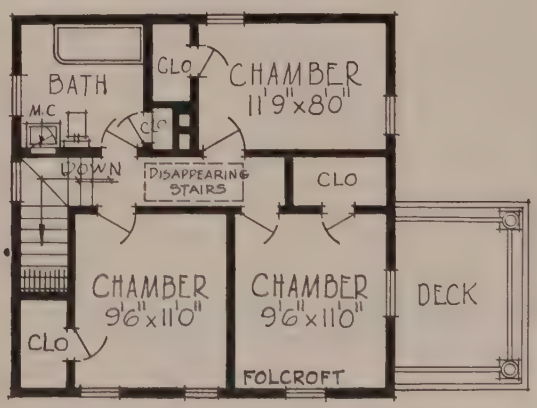
6 Rooms and Bath

The FOLCROFT

A ROOMY, comfortable house with white siding walls and shingle roof effectively combining the gambrel type of roof and dormers with a well designed entrance and a useful porch at the side. The rooms are carefully planned and well arranged. The kitchen has built-in cabinets, and an incinerator for instant sanitary disposal of garbage. A disappearing stairway located in the second floor hall is a useful, space saving feature.





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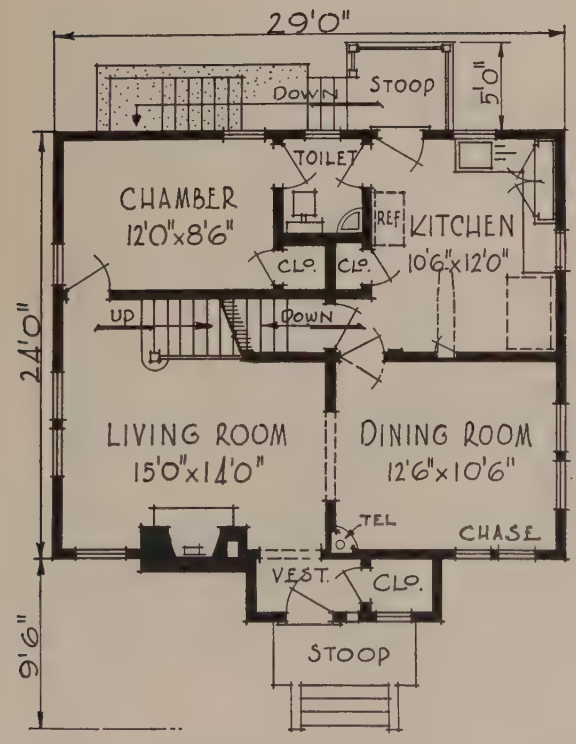
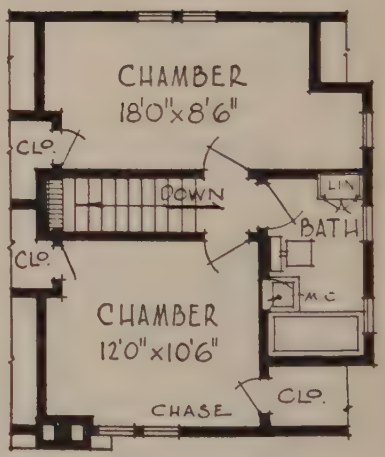
6 Rooms and Bath

The CHASE



THE brick chimney contrasts pleasingly with the shingled exterior. The well arranged first floor includes a toilet. The bath and two large chambers are on the second floor.



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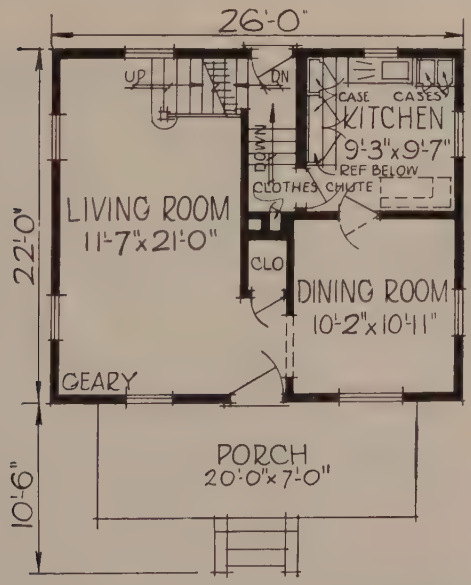
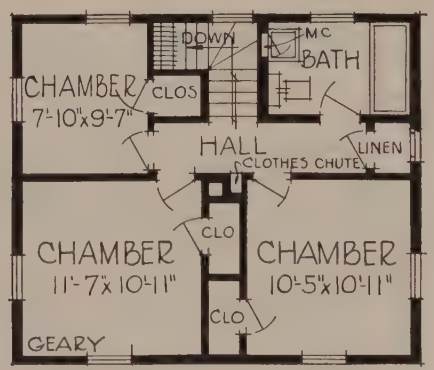
6 Rooms and Bath

The GEARY

A COMPACTLY built home of siding, combined with shingles making a very attractive exterior. There is a large living room occupying the entire depth of the house, an efficiency kitchen, a big open porch. Upstairs there are three comfortable chambers, a bath and ample closet room. There is a built-in clothes chute accessible from both floors.





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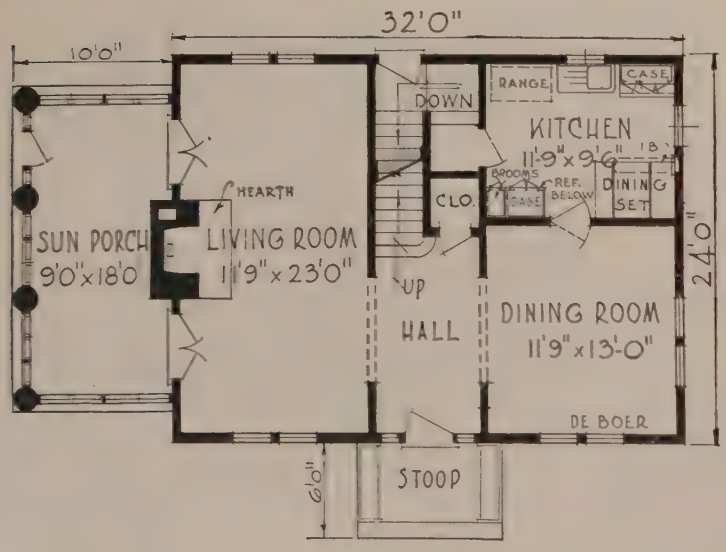
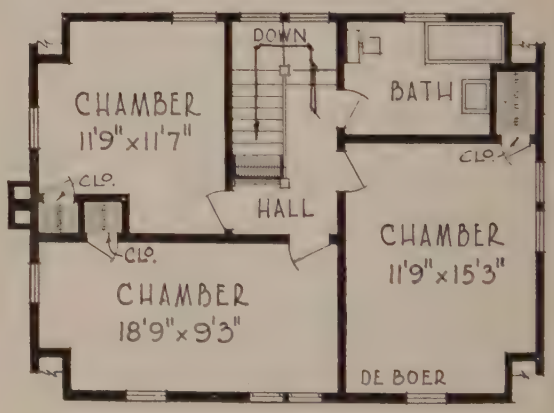
6 Rooms, Bath and Sun Parlor

The DeBOER

A WONDERFULLY attractive exterior and an interior to match. The living room is large and the adjoining sunroom, practically all windows on three sides floods with sunlight. There are many built-in features, including built-in dining set, kitchen cabinets, etc.





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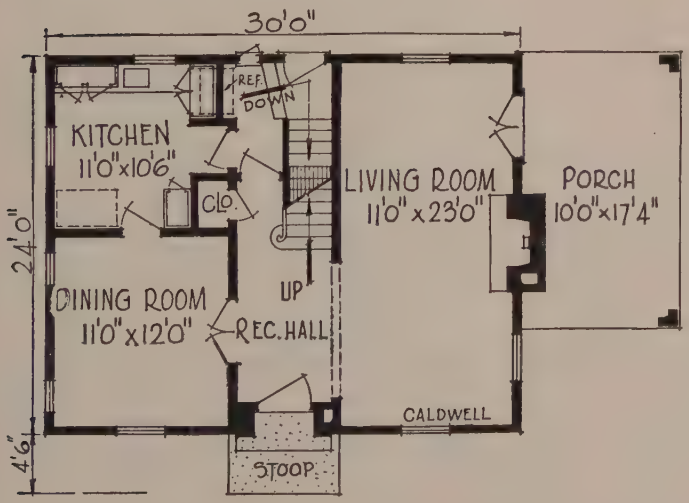
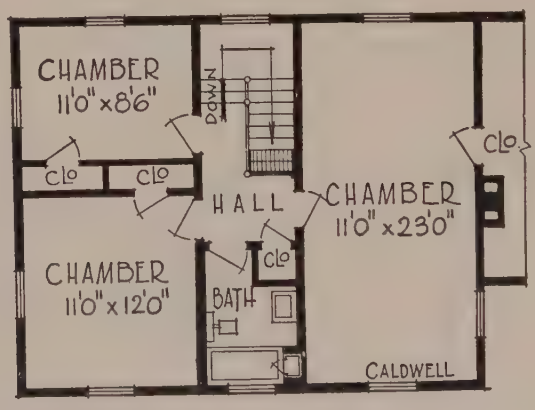
6 Rooms and Bath

The CALDWELL

HERE is a home that proves that curves or ornamentations are not always necessary to achieve architectural perfection. Note the big, roomy, comfortable screened porch, the large upstairs chambers, the splendid and convenient interior arrangement.





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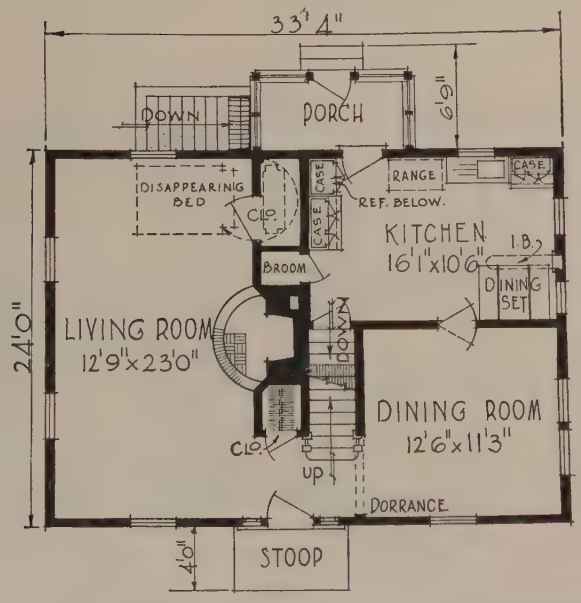
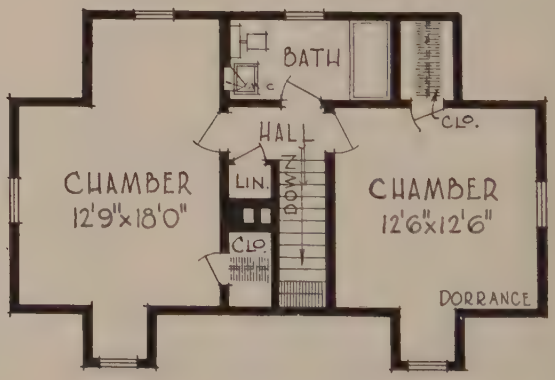
5 Rooms, Bath and Breakfast Nook

The DORRANCE

THE attractive dormers and entrance add much to the appearance of this pleasing home of shingle construction. A well laid out interior utilizes such conveniences as disappearing bed, space-saving closet features, etc. Note the well planned kitchen.





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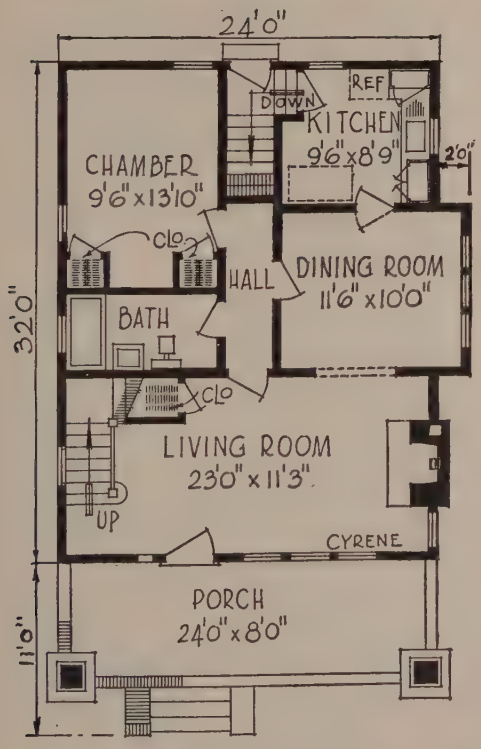
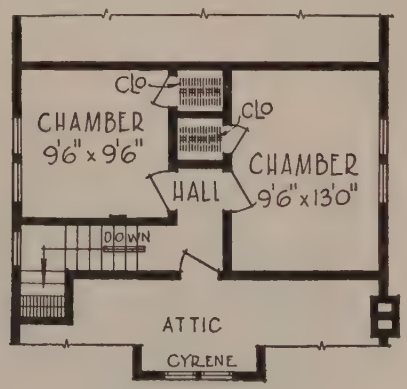
6 Rooms and Bath

The CYRENE

WALLS of siding and brick for porch foundation and columns form this pleasing exterior. Adjustable clothes hangers and built-in mail box are among the conveniences that mean so much in living comfort.





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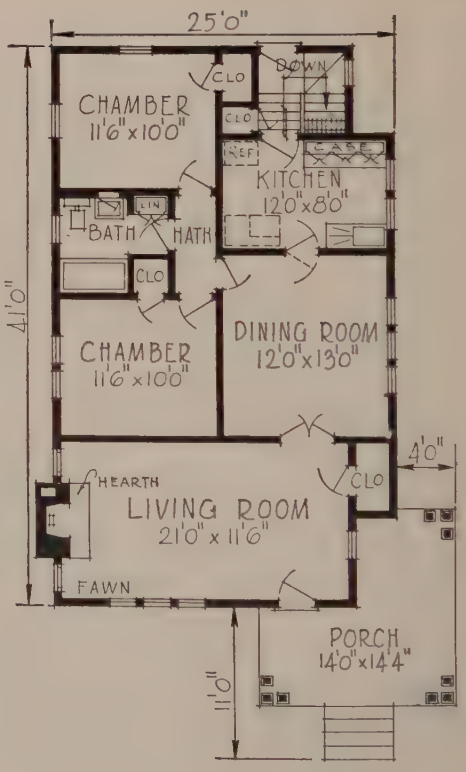
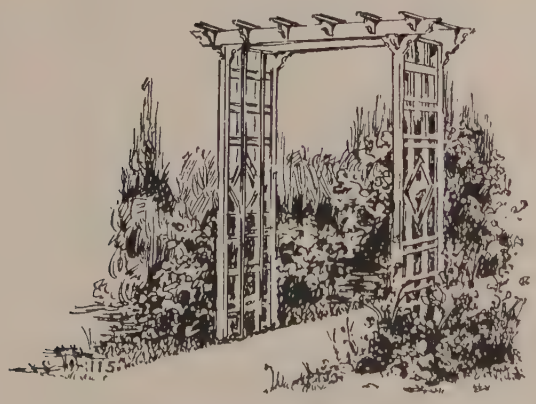
5 Rooms and Bath

The FAWN

A MODEST and charming home with a spacious and comfortable porch. Walls are of siding, foundation and chimney of brick. The interior is arranged for comfort and convenience including built-in kitchen cabinets, and a cheerful living room fireplace. Note convenient coat closet in living room.





A rose arbor is very decorative and improves the appearance of your lawn or garden.

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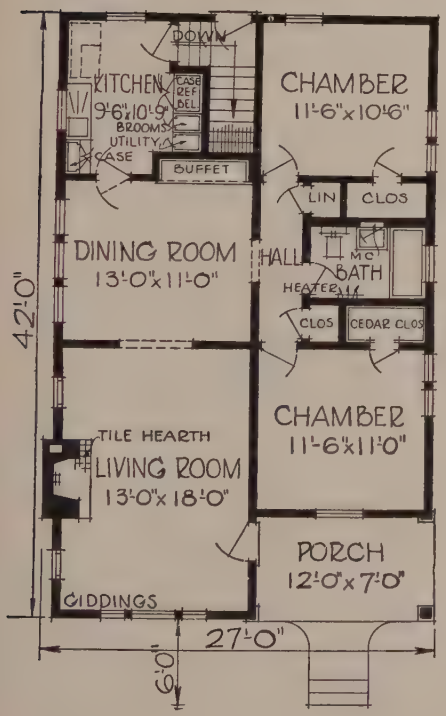
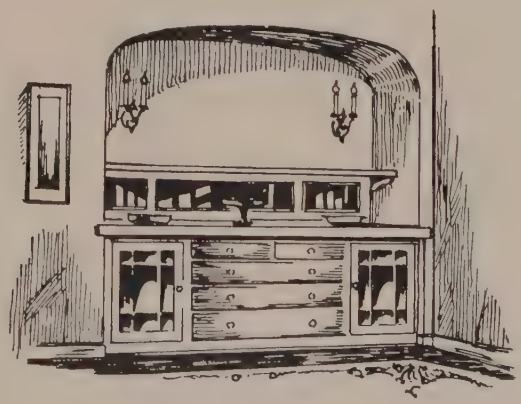
5 Rooms and Bath

The GIDDINGS



A BUNGALOW of simple lines and unusual comfort, built of siding with roof of asphalt shingles. The large living room has a fireplace and there are built-in cabinets and broom closet in the model kitchen. Bathroom has built-in wall heater. Rooms are large. There is a linen closet, cedar closet, and clothes closets. The dining room has built-in buffet.



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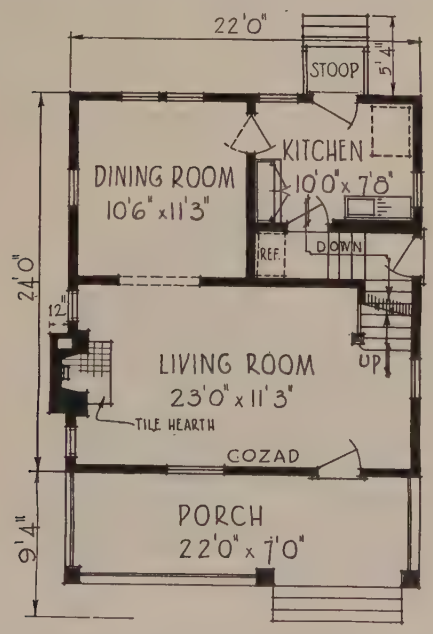
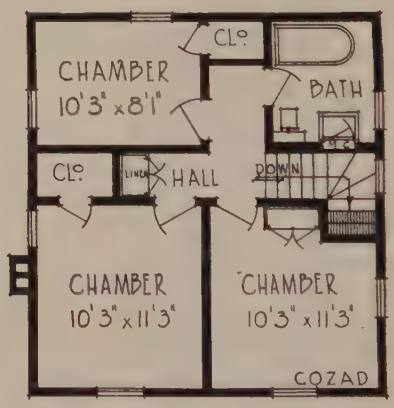
6 Rooms and Bath

The COZAD

THIS cozy little home offers much in appearance and comfort. A study of the well arranged floor plans will show that careful thought has been given to every detail that will save the housekeeper labor and give her a lot in convenience. Rooms are large.





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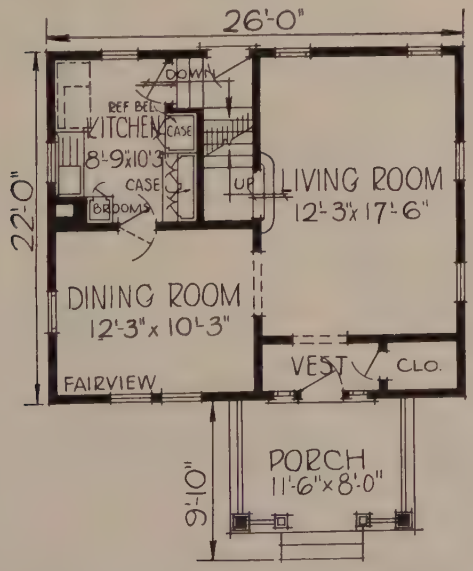
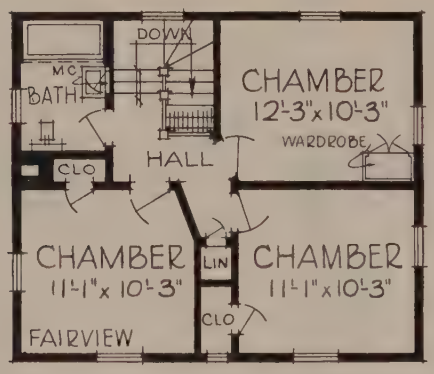
6 Rooms and Bath

The FAIRVIEW

AN ATTRACTIVE home of simple design using siding walls and shingled roof. A useful porch frames the inviting entrance. Dark colored shutters contrast pleasingly against the light wall. The well planned interior includes built-in kitchen cabinets and broom closet. A convenient linen closet is located in the second floor hall and the rear bedroom is provided with a built-in wardrobe. This type of home is always popular.





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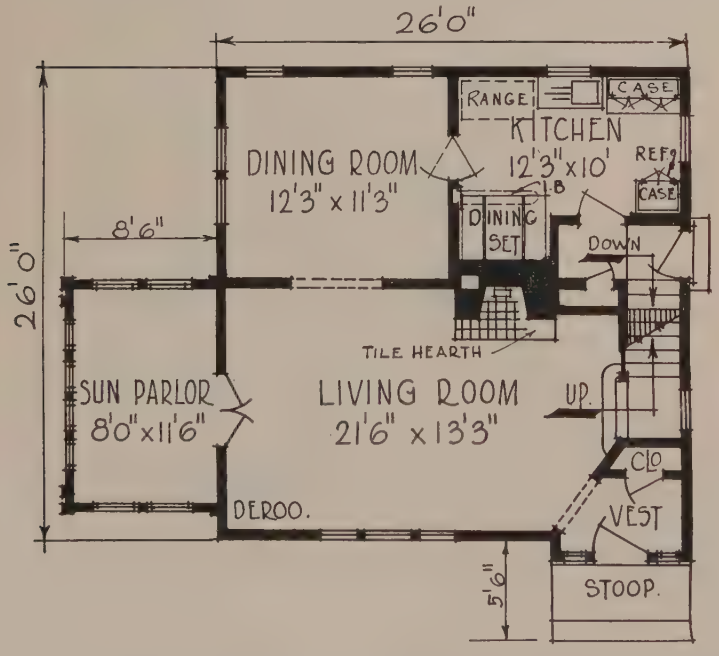
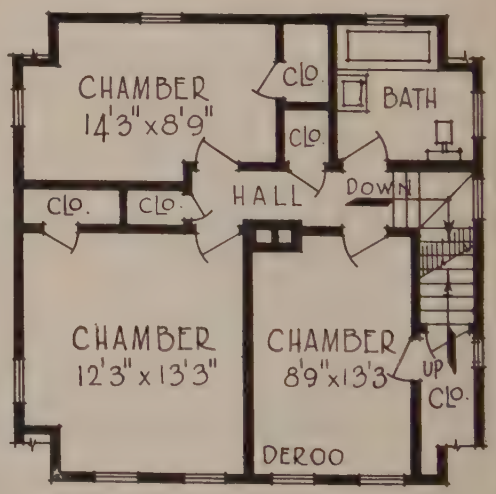
6 Rooms, Bath and Sun Parlor

The DEROO

THE arched entrance and attractive arrangement of windows makes the Deroo an unusual home. Note the splendid arrangement and size of rooms, the ample closet space, the many built-in conveniences. There is a splendid sun parlor off the living room.





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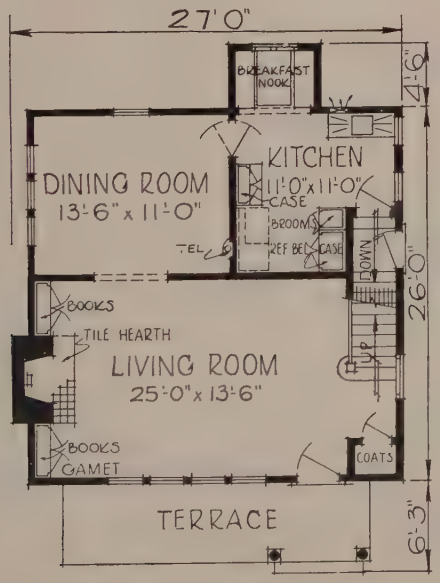
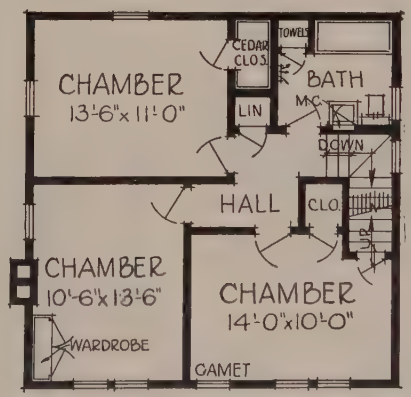
6 Rooms, Bath and Breakfast Nook

The GAMET

THE DORMER, with its well arranged windows, helps form the attractive exterior of this shingled home. There is a trellised entrance at front as well as at the side door. Notice the size of living room, the fireplace, built-in bookcases, coat closet, and stairs leading directly from living room to the floor above. There is an efficiency kitchen with breakfast nook, cabinets, etc. Three chambers and bathroom on second floor





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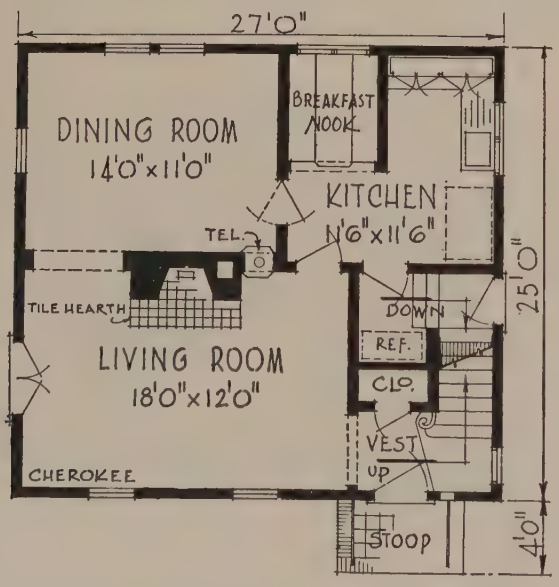
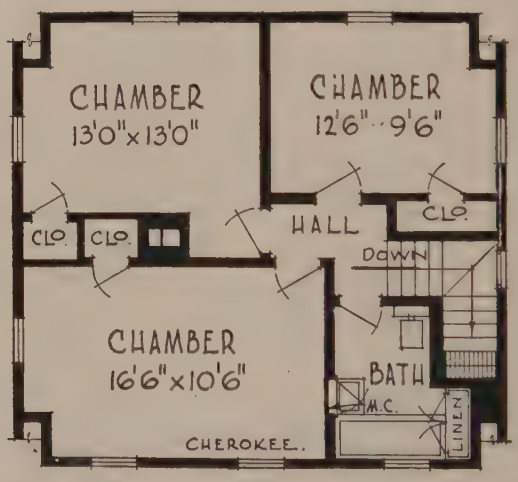
6 Rooms, Bath and Breakfast Nook

The CHEROKEE

HERE is a pleasing home that depends in no way upon freakish lines or ornamentation for its attractiveness. This carefully planned interior will give ample convenience and comfort. The French doors at left permit access to lawn from living room.





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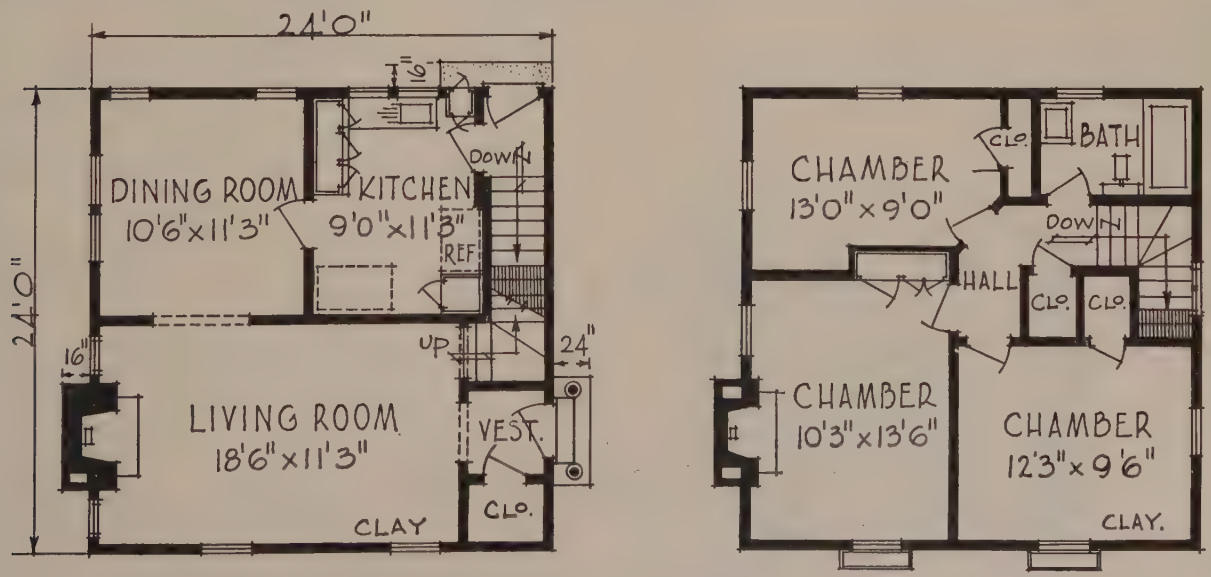
6 Rooms and Bath

The CLAY

THE green shutters add a pleasing touch, and blend harmoniously with the white shingled side walls. There is an attractive entrance at the side. Note the convenient arrangement of rooms, their ample size; kitchen cabinets and package receptacle are included. Large living room. Three large chambers and bath are on second floor.



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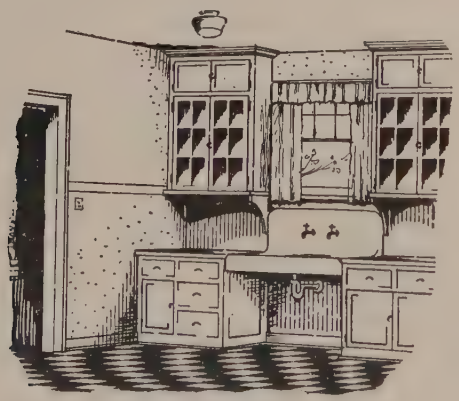
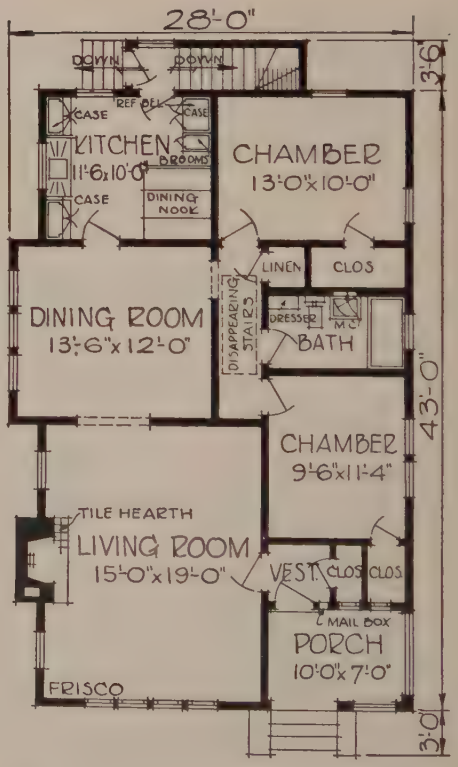
5 Rooms and Bath

The FRISCO

SHINGLES on brick foundation forms the attractive exterior of this home with its pleasing roof lines. There is an open porch; a large living room with tiled fireplace; a built-in mail box; an efficiency kitchen that has built-in dining nook; cabinets, broom closets, etc., a model bath room with built-in dresser, linen closet and ample clothes closets. There are two ample bed rooms and a disappearing stairway to attic



Interior View of Kitchen



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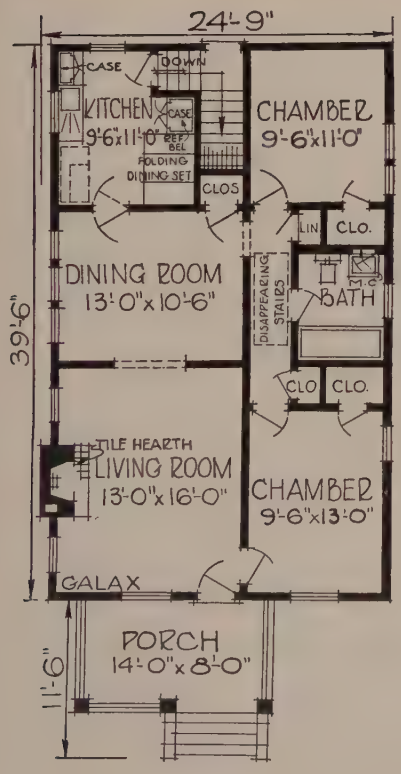
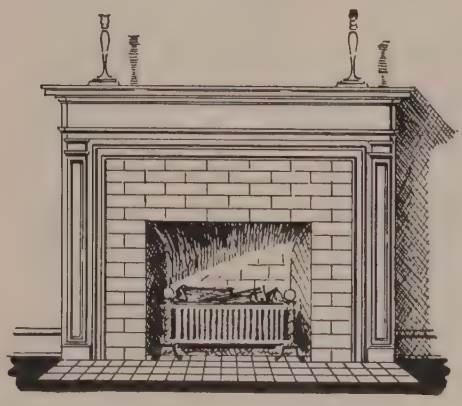
5 Rooms and Bath

The GALAX

SIDING, with brick porch columns and stone foundation completes this attractive exterior. There is a comfortable open porch, a living room with fireplace, an efficiency kitchen with folding dining set, utility cabinets, etc., bathroom between two comfortable sleeping rooms, plenty of clothes closets, a linen closet and a disappearing stairway giving convenient access to the attic.





View of the cheerful fireplace

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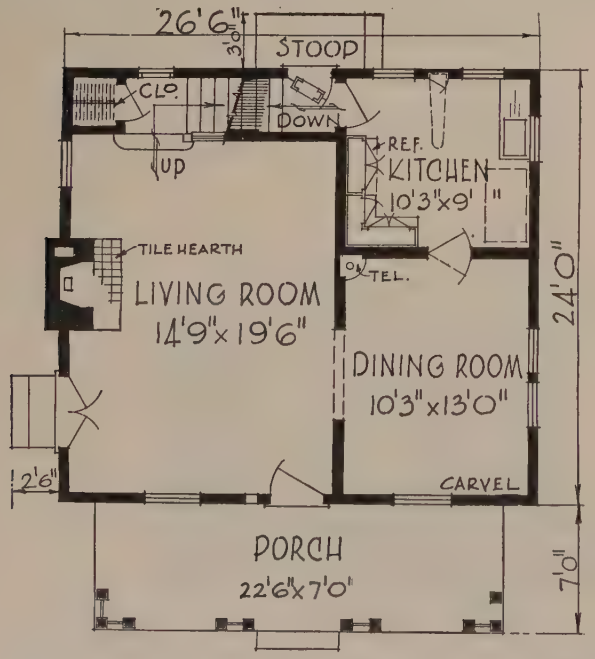
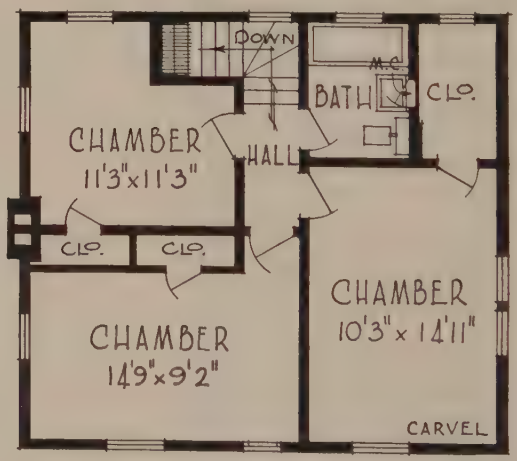
6 Rooms and Bath

The CARVEL

THE very simplicity of this home is truly captivating. Note the entrance to living room from the side as well as from the front. Rooms are large and well laid out; there are many comfort-bringing conveniences, such as space-saving closets, etc.





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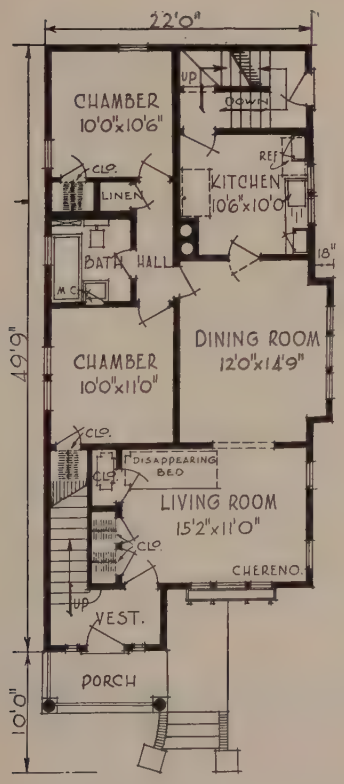
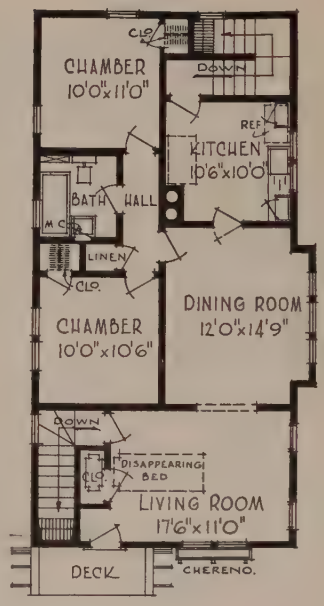
Two Apartments

The CHERENO

A TWO-APARTMENT home of unusual attractiveness. Both floors present a convenient arrangement of commodious rooms. Disappearing beds, adjustable closet fixtures, kitchen cabinets, linen closets and medicine cabinets are among the many conveniences. This home is worth careful consideration both from the standpoint of a home and as an investment.

EACH FLOOR HAS 5 ROOMS AND BATH





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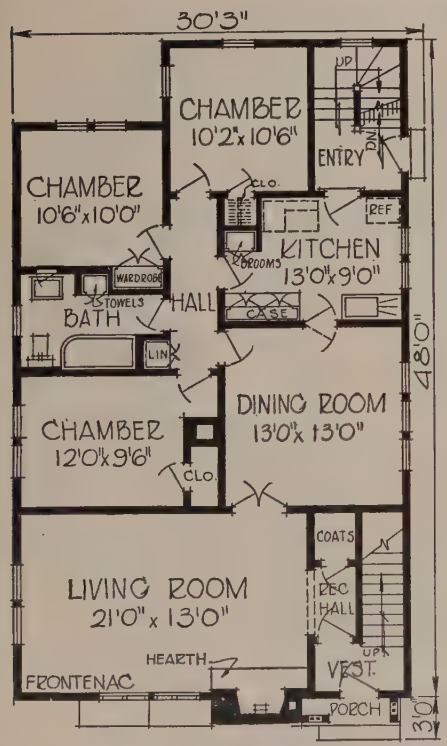
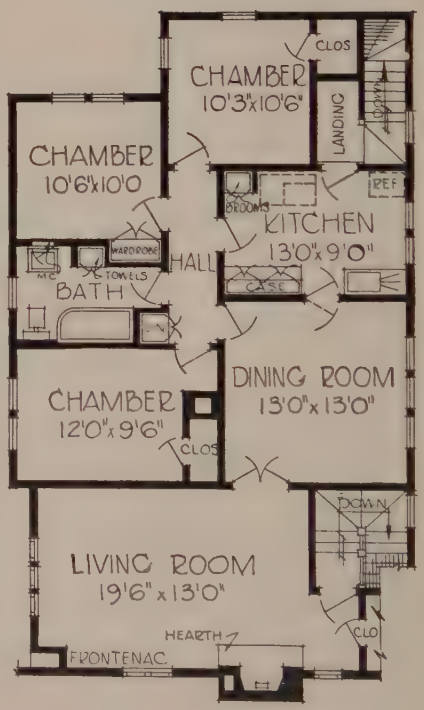
Two Apartments

The FRONTENAC

THE SHINGLE walls and the brick and stucco chimney form the pleasing combination for the exterior of this attractive two-apartment home. There are well grouped windows, those at the front of second floor being shuttered. Both floors are well planned and show a large living room upstairs and down. Efficiency kitchens with built-in conveniences, model bath rooms with towel cabinets. There is plenty of closet space and nothing has been overlooked that will bring comfort.

EACH FLOOR HAS 6 ROOMS AND BATH





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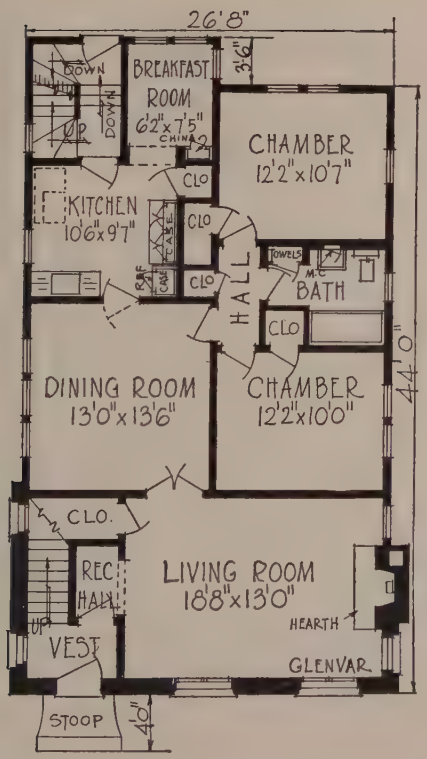
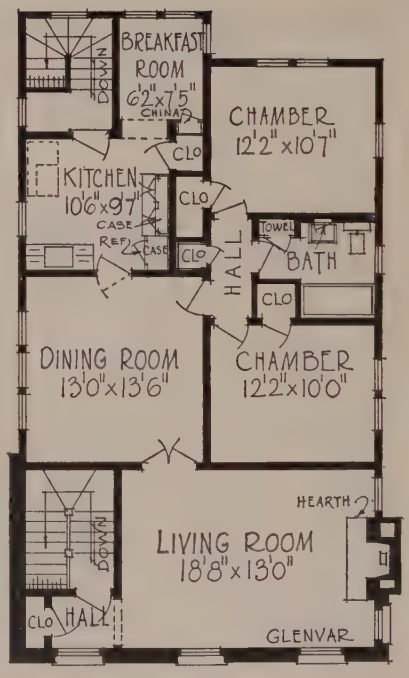


The GLENVAR

THERE is a very effective exterior treatment to this attractive two family home. Notice how pleasingly the face brick is combined with stucco at second floor; the splendid treatment of windows; the inviting entrance with iron rails and ornamental grill above entrance door. Look at the plans, notice the splendid arrangement of rooms; the large living rooms with fireplaces; the efficiency kitchens with many built-in features; the breakfast rooms; and model baths with built-in towel cabinets.

EACH FLOOR HAS 5 ROOMS, BATH AND BREAKFAST ROOM



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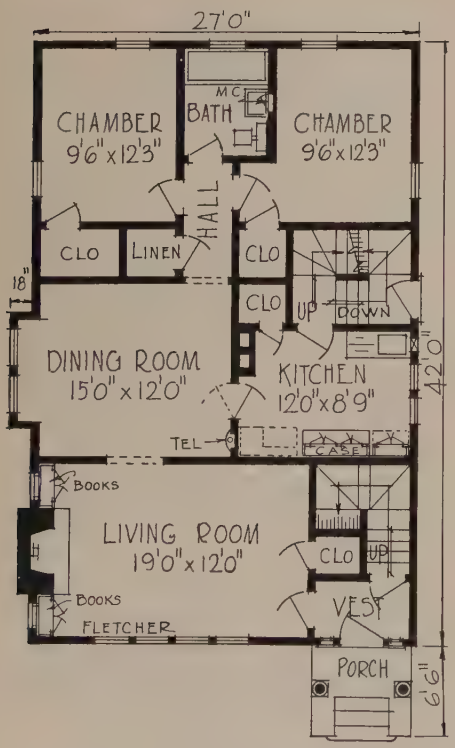
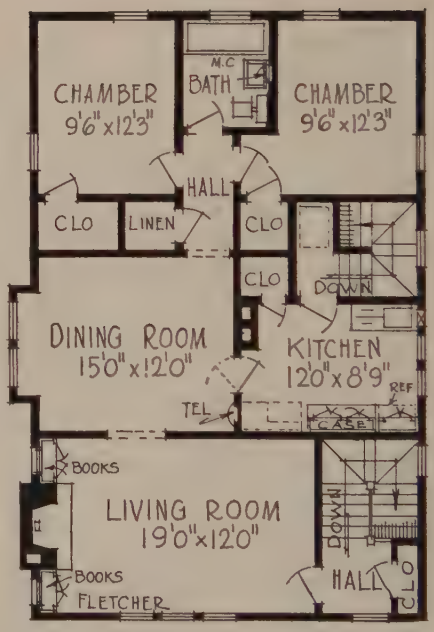


The FLETCHER

From the outside no one would ever know that this attractive home of shingle construction contained two complete apartments, well arranged for comfortable living. Note the large living rooms with fireplaces and built-in book cabinets. The model kitchens, built-in phone cabinets, and ample closet space. The bathrooms are ideally located at rear of house between the chambers.

EACH FLOOR HAS 5 ROOMS AND BATH



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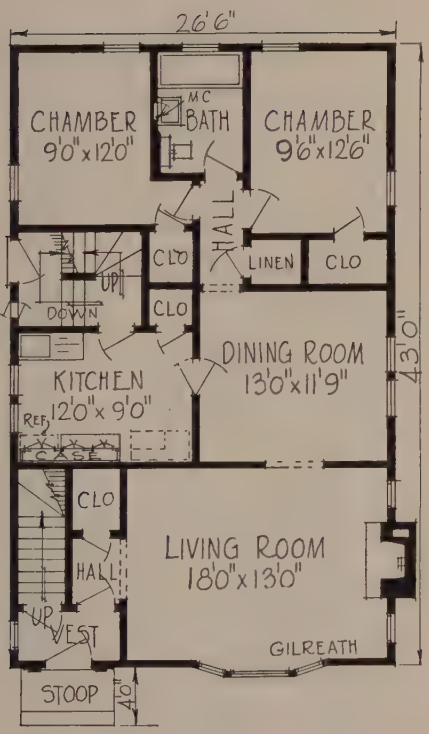
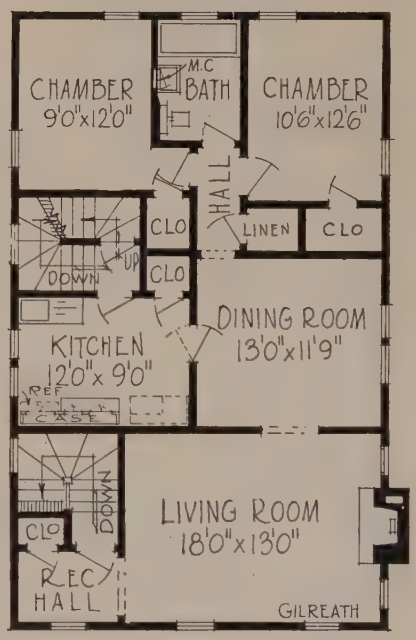
Two Apartments

The GILREATH

THERE are two apartments of unusual convenience in this home so attractively built of white siding. Notice the bay window in downstairs living room, the splendid arrangement of both floors, the fireplaces in living rooms, the built-in cabinets in kitchens, the number of clothes closets, the linen closets, and the model baths so conveniently located.

EACH FLOOR HAS 5 ROOMS AND BATH





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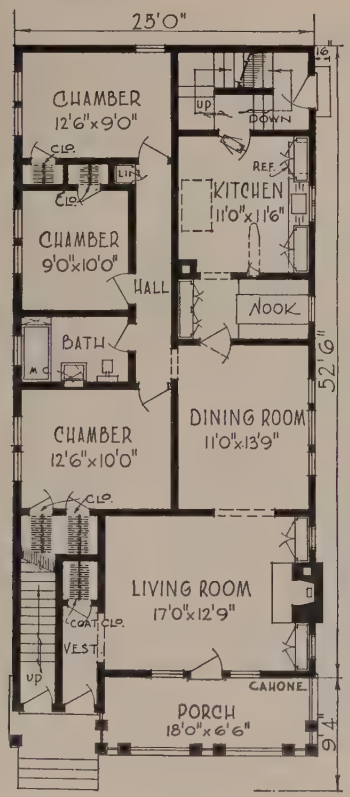
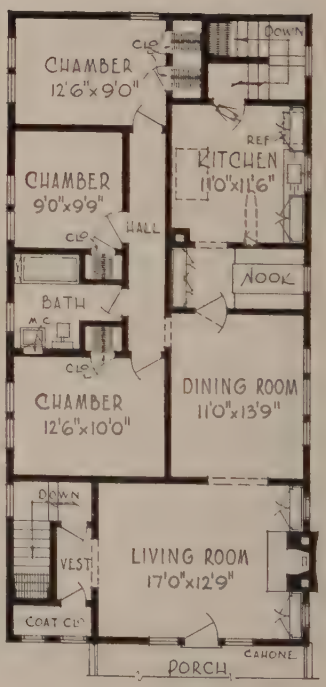


The CAHONE

THE artistic treatment of the front makes this rather an unusual two-apartment home. Both floors are well arranged. By flanking the fireplaces with built-in bookcases, a pleasing effect is obtained. Built-in features include dining nooks, ironing boards, rear door package receptacles, and metal medicine cabinets.

EACH FLOOR HAS 6 ROOMS
AND BATH NOOK



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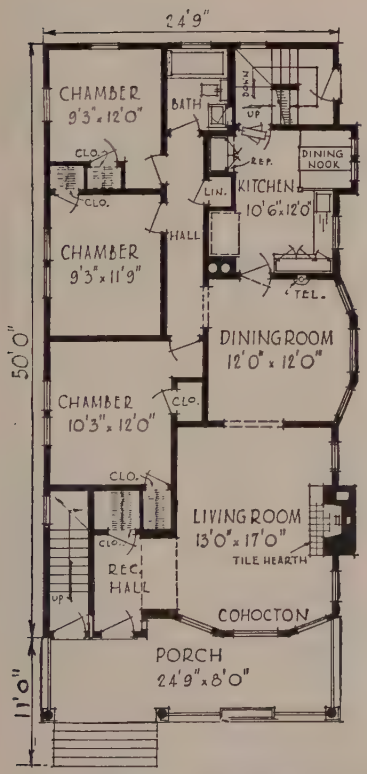
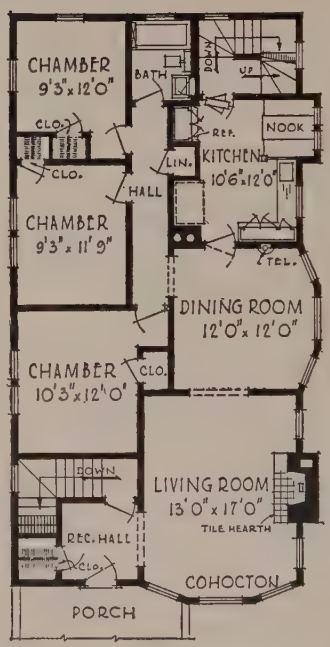
Two Apartments



The COHOCTON

Two floors of real living comfort are in this two-apartment home, a pleasing combination of siding and shingles, in contrasting colors, on a cement block foundation. Such conveniences as built-in phone cabinets, rear door package receptacles and ample closets, with adjustable hangers, are among the many features that modern living demands.

EACH FLOOR HAS 6 ROOMS,
BATH AND DINING NOOK



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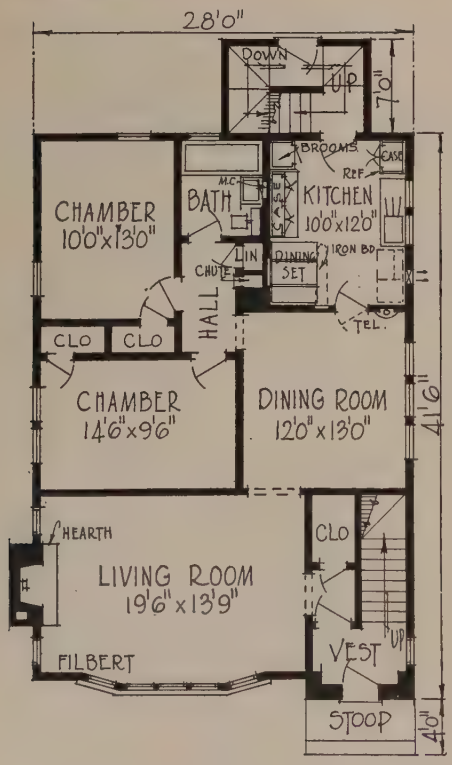
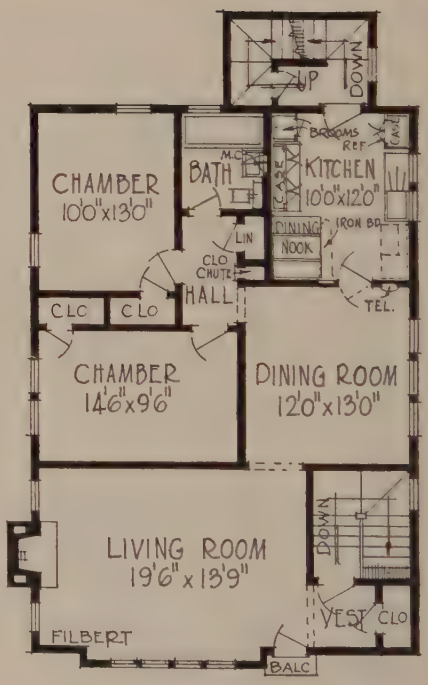
Two Apartments



The FILBERT

SHINGLES, combined with brick at bay window and a half timbered stucco gable forms this attractive exterior. There are two apartments, each with a well planned floor including a large living room with fireplace, an efficiency kitchen with many built-in features including a dining set, dining room with built-in phone cabinet. Two chambers, model bath, and ample closet space are also provided.

EACH FLOOR HAS 5 ROOMS AND BATH



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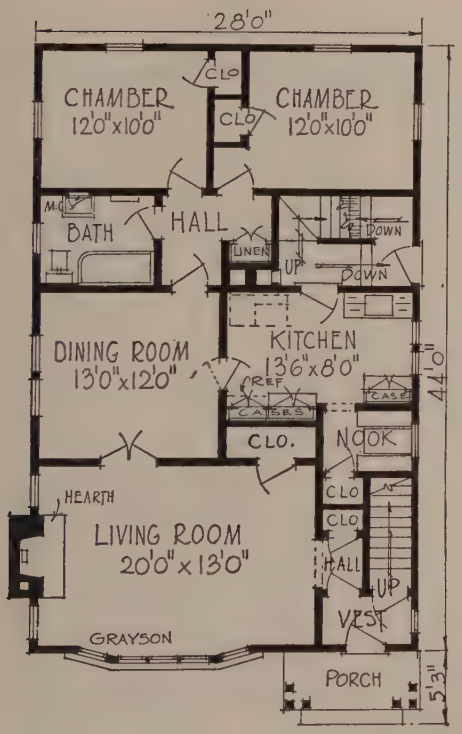
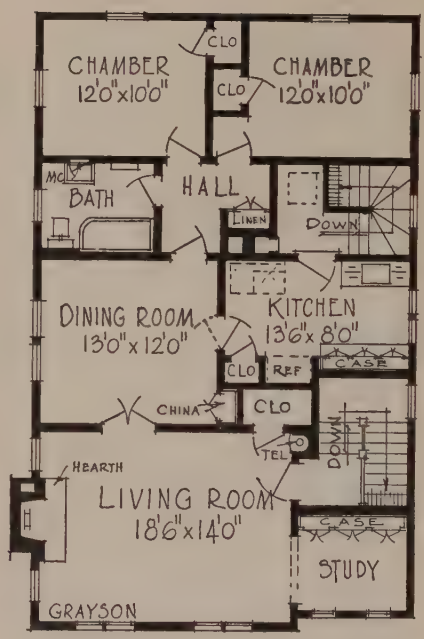
Two Apartments

The GRAYSON

TWO APARTMENTS of unusual comfort and convenience are built into this attractive home of shingles and stucco, with half timber effect, used on front gable. Note the excellent grouping of windows, the size of rooms and their splendid arrangement. In the model kitchens are many built-in features. The second floor has a study or den and a built-in china case.

EACH FLOOR HAS 5 ROOMS AND BATH





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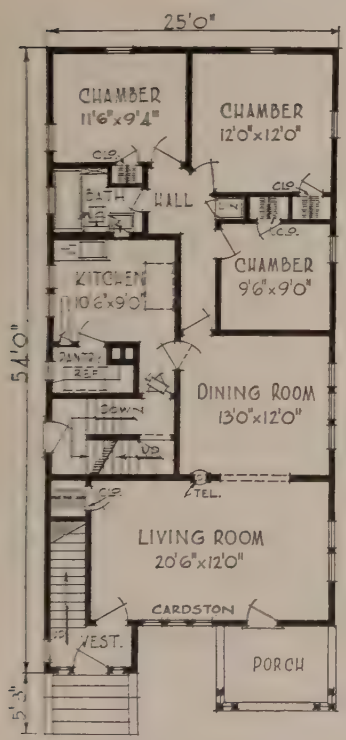
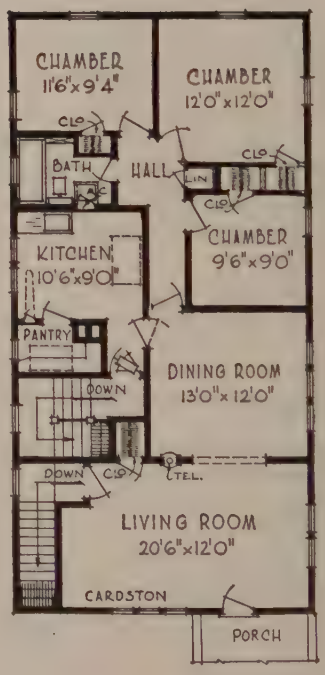
Two Apartments

The CARDSTON

AN ATTRACTIVE two-apartment home that uses siding for walls, and brick for stoop and foundation in pleasing combination. There are two exceptionally well laid out floors, with porches, and such built-in conveniences as telephone cabinets, delivery receptacles in doors, and adjustable space-saving closet fixtures. Rooms are large.

EACH FLOOR HAS 6 ROOMS AND BATH





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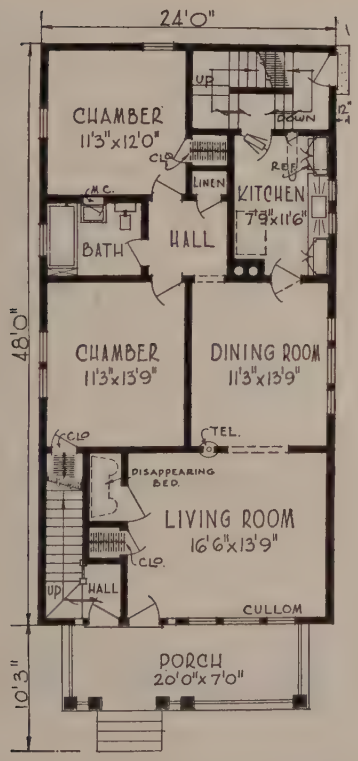
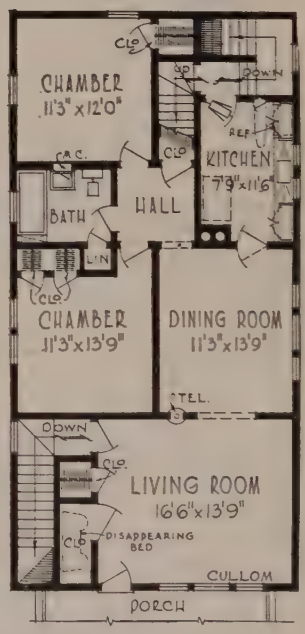
Two Apartments

The CULLOM

A TWO-APARTMENT home that can be built on a narrow lot, if desired. Both floors are well arranged and many conveniences such as disappearing beds, built-in mail boxes and package receptacles are included. There is ample closet space. Houses of this character not only provide a comfortable home but assure an extra income as well. Suitable to any locality.

EACH FLOOR HAS 5 ROOMS AND BATH





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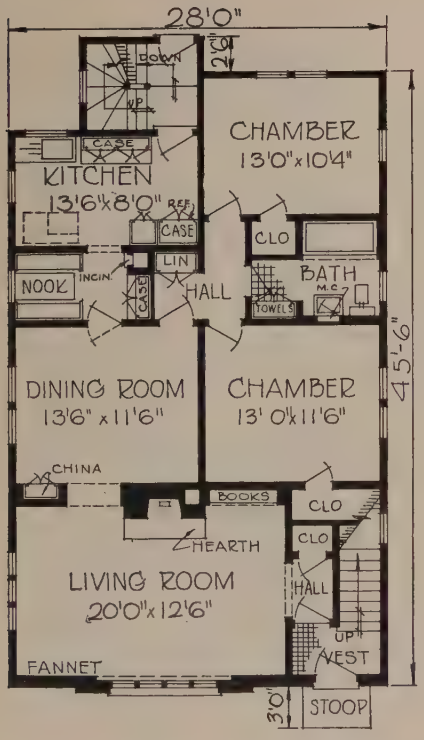
Two Apartments

The FANNET

TWO WELL planned apartments are contained in this attractive home. Note the splendidly grouped windows, the attractive gables and dormer, the inviting entrance. Plans include large living rooms with fireplaces, built-in book cases, convenient kitchens with adjoining dining nooks and incinerator, and model bath rooms with built-in towel cabinets. Rooms on both floors are particularly well arranged to bring the utmost in comfort.

EACH FLOOR HAS 5 ROOMS, BATH AND NOOK



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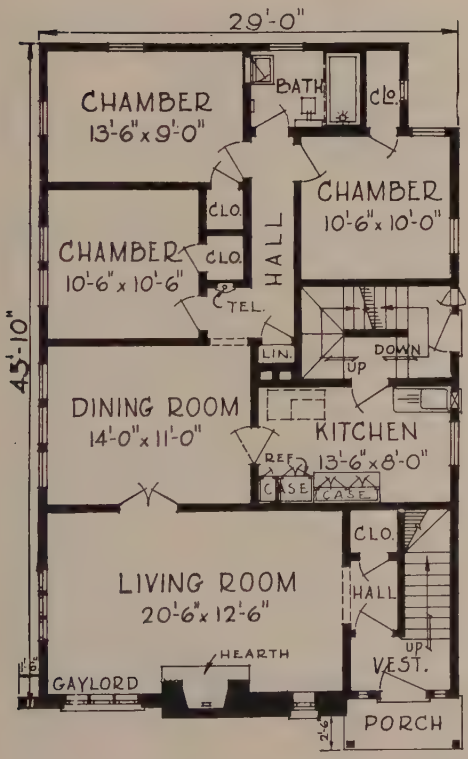
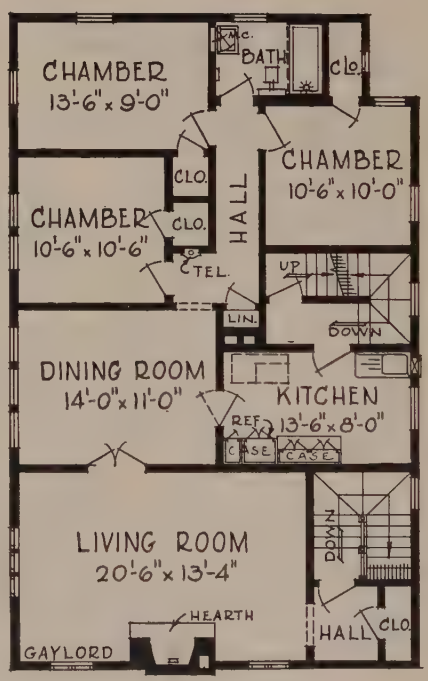
Two Apartments

The GAYLORD

HERE is a two-apartment home of siding with a brick treatment at lower portion of front and half timbered stucco for the upper portion. Both floors are well arranged, with conveniently located rooms. Living rooms have fireplaces, kitchens have built-in cabinets and there are built-in phone cabinets in rear halls. There are three comfortable chambers on each floor, model baths and plenty of closets.

EACH FLOOR HAS 6
ROOMS AND BATH





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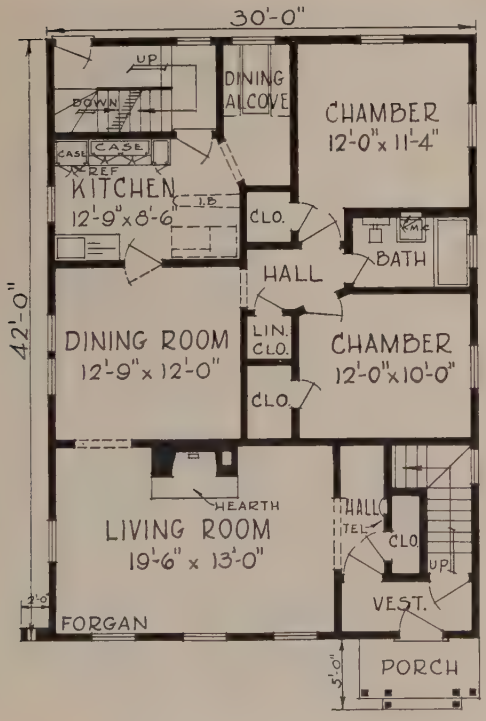
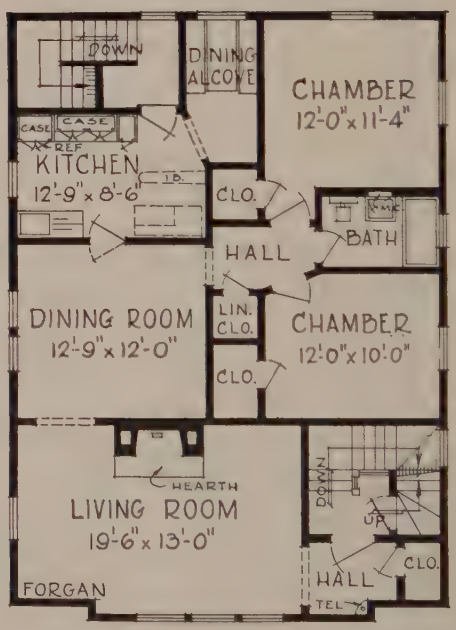
Two Apartments

The FORGAN

THERE are two apartments, of five rooms each, in this attractive home of shingles. From the floor plans one will instantly observe the splendid arrangement, the many built-in features, the size and convenience of rooms. Note the dining alcoves, the numerous closets, the large living rooms with fireplaces.

EACH FLOOR HAS 5 ROOMS, BATH AND DINING ALCOVE





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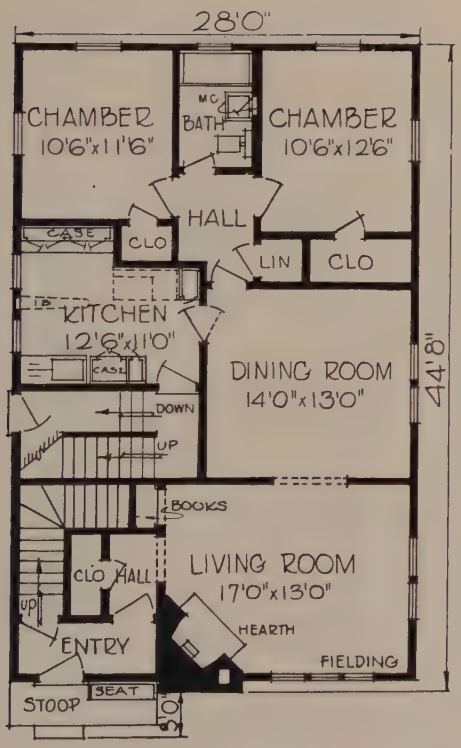
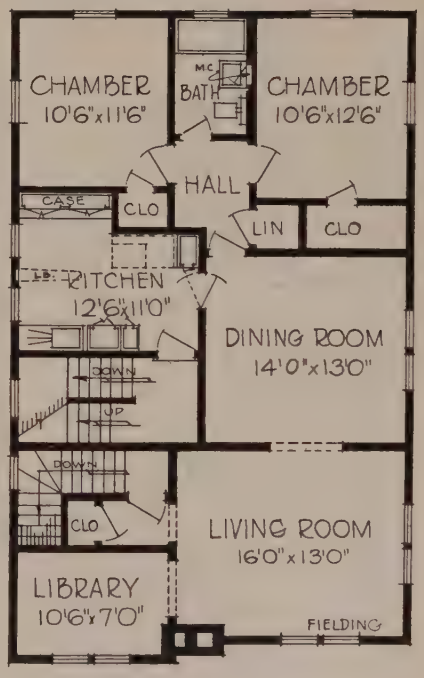
Two Apartments

The FIELDING



TWO FLOORS of real convenience and comfort are in this attractive two-apartment home of shingles with stucco gable above entrance way. Note the porch bench at entrance, the well balanced chimney and good arrangement of windows. Downstairs living room has a fireplace in one corner and built-in book case. Kitchens have built-in cabinets. Dining rooms are large and bathrooms are conveniently located in the rear between the two sleeping rooms. The second floor apartment has a library off the living room.

EACH FLOOR HAS 5 ROOMS AND BATH



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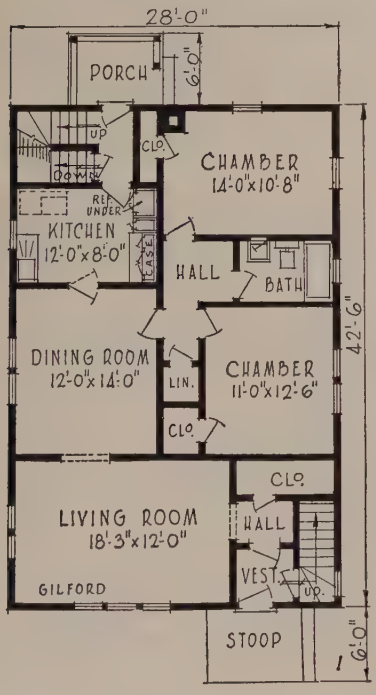
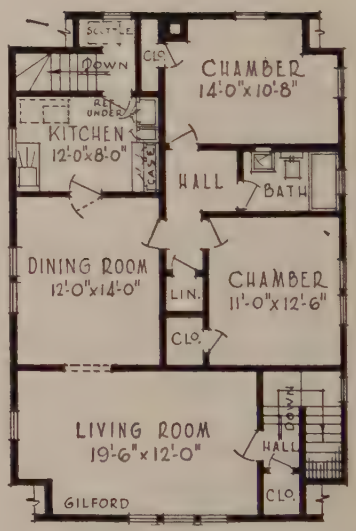
Two Apartments

The GILFORD



THIS attractive home of shingles, with the ornamental gate at left, contains two apartments of unusual convenience and comfortable arrangement. Rooms are large and well planned. In the kitchen are built-in cabinets and there are two large chambers on each floor, with bath, linen closet and clothes closets.

EACH FLOOR HAS 5 ROOMS
AND BATH



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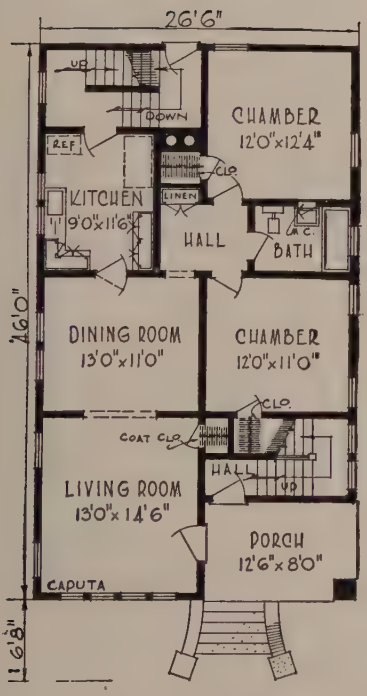
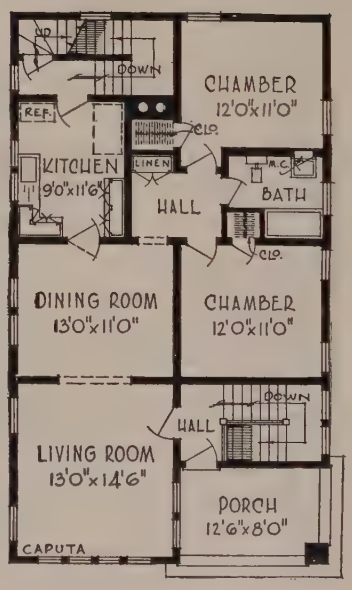
Two Apartments

The CAPUTA



SIDING and shingles are cleverly combined to give pleasing contrast in texture and coloring, in this attractive two-apartment home. Deeply recessed porches assure the highly prized privacy desired in the open porch. Each floor is exceptionally well planned and equipped with kitchen and medicine cabinets, linen closets and space-saving clothes closets conveniently placed in the rooms.

EACH FLOOR HAS 5 ROOMS AND BATH



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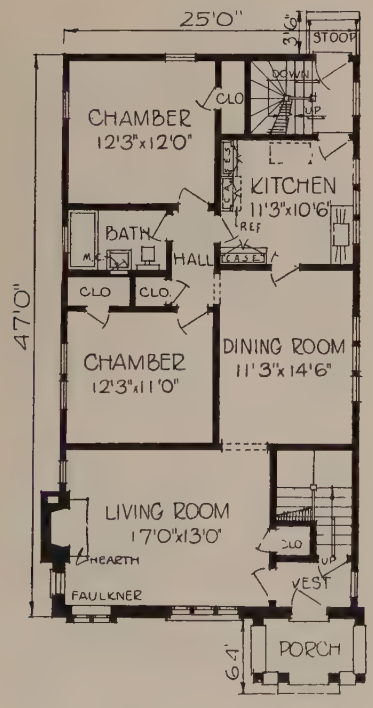
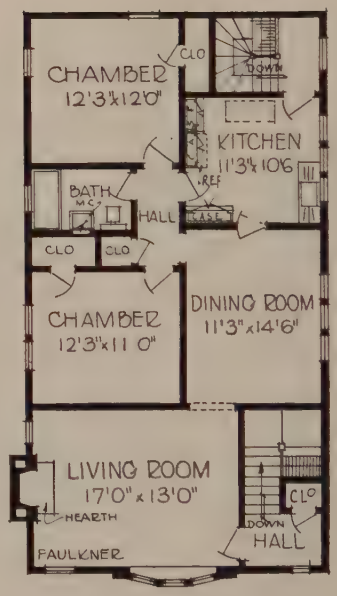
Two Apartments

The FAULKNER



HERE is a two-apartment home in which shingles are pleasingly combined with stucco to form an exceptionally attractive exterior. Notice the unusual arrangement of ornamental windows, the bay window in living room of second floor and the inviting entrance. Both floors are exceptionally well planned, giving a convenient arrangement of large and comfortable rooms. Living rooms are commodious with fireplace and there are efficiency kitchens with built-in features. There are model bathrooms and ample closet space provided for both floors.

EACH FLOOR HAS 5 ROOMS AND BATH



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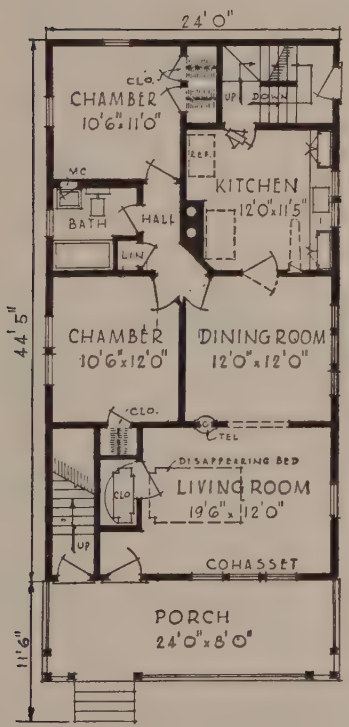
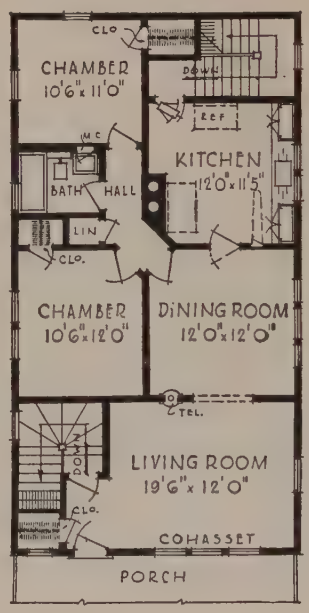
Two Apartments

The COHASSET



THIS two-apartment house is a splendid example of how roomy a home of this type can be without being overly large. Shingles and siding are used in contrasting and pleasing combination. Both floors are well arranged, rooms are large, and there is a disappearing bed in the first floor apartment.

EACH FLOOR HAS 5 ROOMS AND BATH



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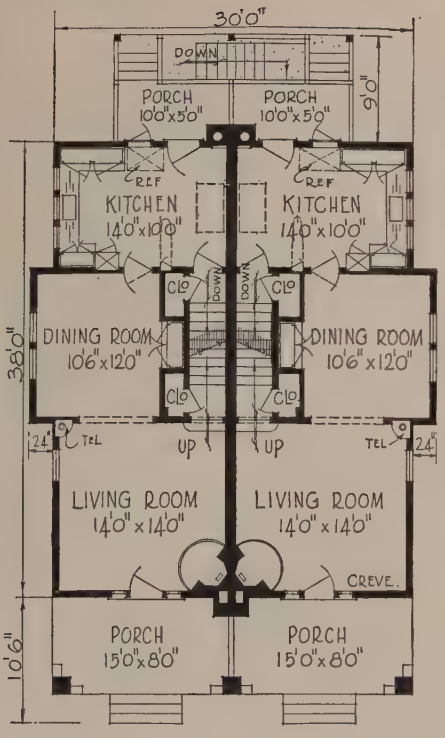
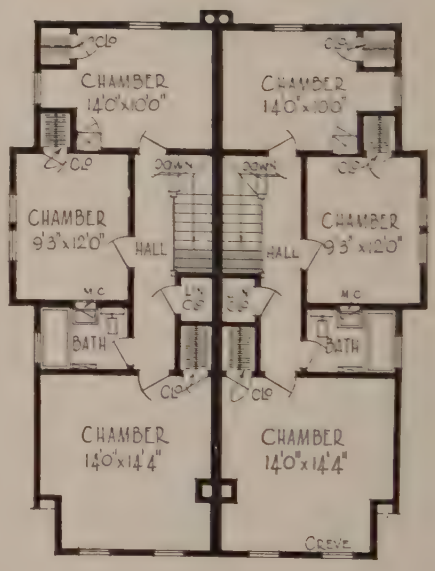
Two-Family Home



The CREVE

A TWO-FAMILY (double) house that offers much in living comfort, as well as conveniences. The brick columns and porch contrast pleasingly with the walls of siding and shingles. Graceful dormers break the roof line. Shutters add a finishing touch to the upper windows. Rooms are well arranged and many conveniences add to living comfort.

EACH FAMILY HAS
6 ROOMS AND BATH



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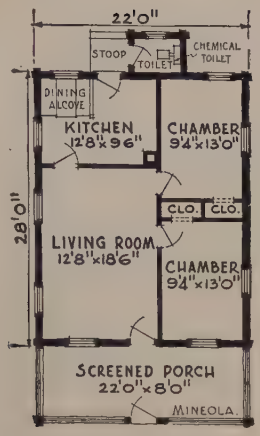
SUMMER CAMPS AND LODGES



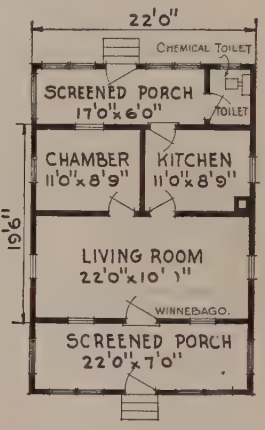
Size 22′ 0″ x 40′ 0″

4 Rooms, Toilet and Porch

The MINEOLA

When one considers the quaint, simple attractiveness of the "Mineola" it is not surprising that so many similar types are found along the shores of our lakes and rivers.

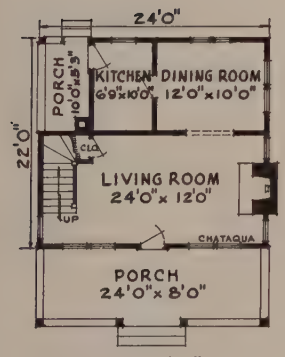
3 Rooms, Porches and Toilet

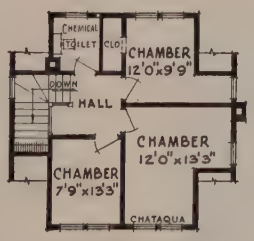


Size 22′ 0″ x 32′ 6″

The WINNEBAGO

A lodge built in the woods or near the water shore is an investment in happiness and health.





Size 24′ 0″ x 30′ 0″

6 Rooms, Toilet and Porches

The CHATAUQUA

"The Chatauqua" is an attractive summer cottage, conveniently designed to offer the advantages of a two-story home.

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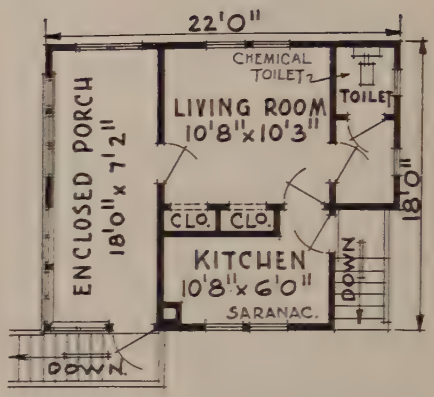
SUMMER CAMPS AND LODGES

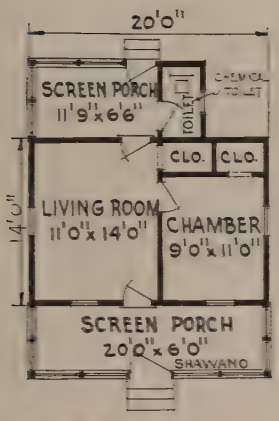
2 Rooms, Porch and Toilet



Size 22' 0" x 18' 0"

The SARANAC

A little place away from the sweltering city—for recreation and play.



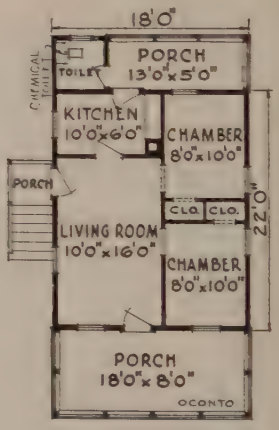
Size 20' 0" x 26' 6"

2 Rooms, Toilet and Porches

The SHAWANO

The small investment required to build "The Shawano" will be returned in payments of renewed vigor, health, happiness and satisfaction.

4 Rooms, Porches and Toilet



Size 18' 0" x 35' 0"

The OCONTO

The blue print plans are completely detailed in such a manner that any builder can easily erect without delay or misunderstanding.

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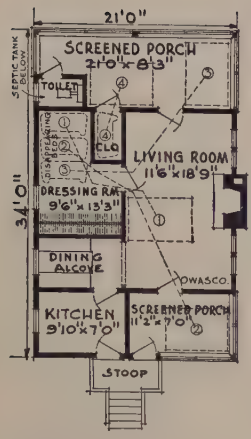
SUMMER CAMPS AND LODGES



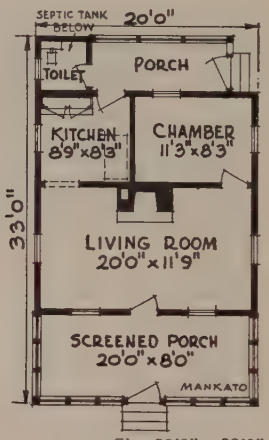
Size 21'0" x 34'0"

2 Rooms, Toilet, Dressing Room and Porches

The OWASCO

An ideal arrangement in which unobstructed floor spaces during the day are converted into sleeping quarters at night, by using disappearing beds.

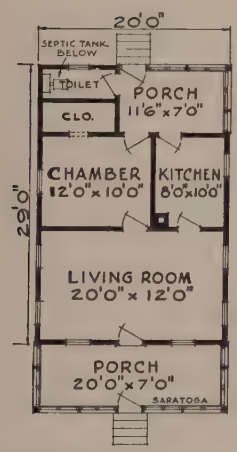
3 Rooms, Toilet and Porches



Size 20'0" x 33'0"

The MANKATO

"The Mankato" has qualities which make an instant appeal to those desiring a modest summer home of this size.



Size 20'0" x 36'0"

3 Rooms, Toilet and Porches

The SARATOGA

A glazed-in porch is always desirable. Also, there are many other features which make this design very popular.

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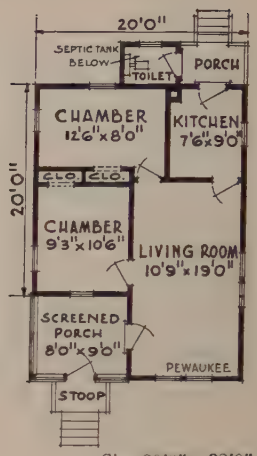
SUMMER CAMPS AND LODGES

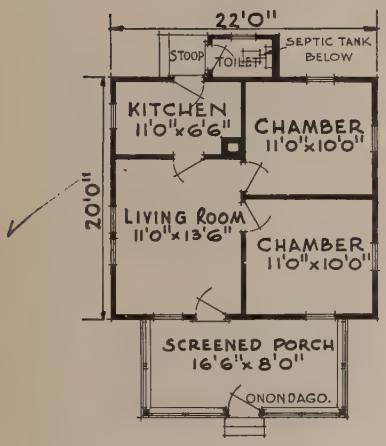
4 Rooms, Porches and Toilet



Size 20'0" x 32'0"

The PEWAUKEE

Vacation time—swimming, boating and rest in a cottage by the lake.



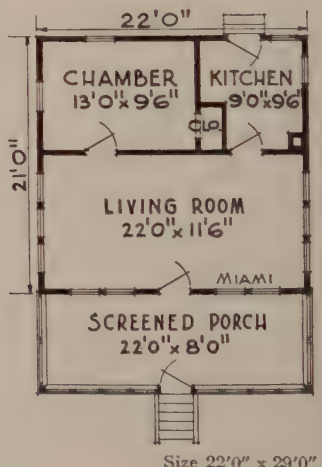
Size 22'0" x 31'6"

4 Rooms, Toilet and Porch

The ONONDAGO

The benefits in health and happiness more than offset the moderate cost of "The Onondago."

3 Rooms and Porch



Size 22'0" x 29'0"

The MIAMI

The blue-prints provide for substantial economical construction and prevent costly errors.

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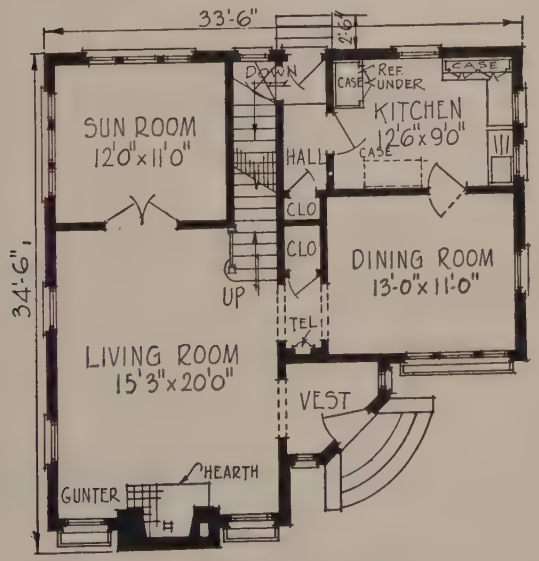
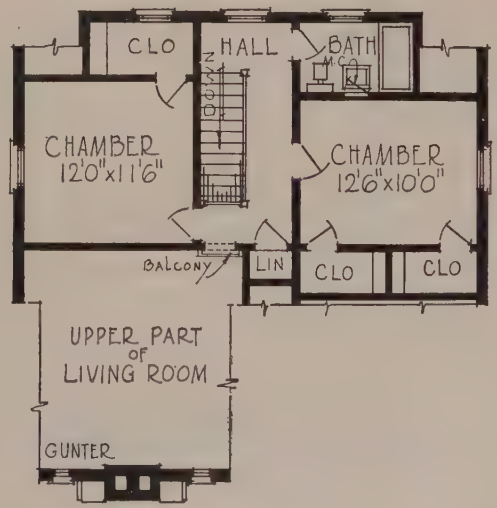
5 Rooms, Bath and Sun Room

The GUNTER

A TYPICAL Old English home built of face brick with shingled roof. The pleasing entrance design and outstanding chimney are distinctive. Living room fireplace, built-in telephone cabinet in passage connecting living and dining room and built-in kitchen cabinets are among the many modern features. The front gable forms the living room ceiling.





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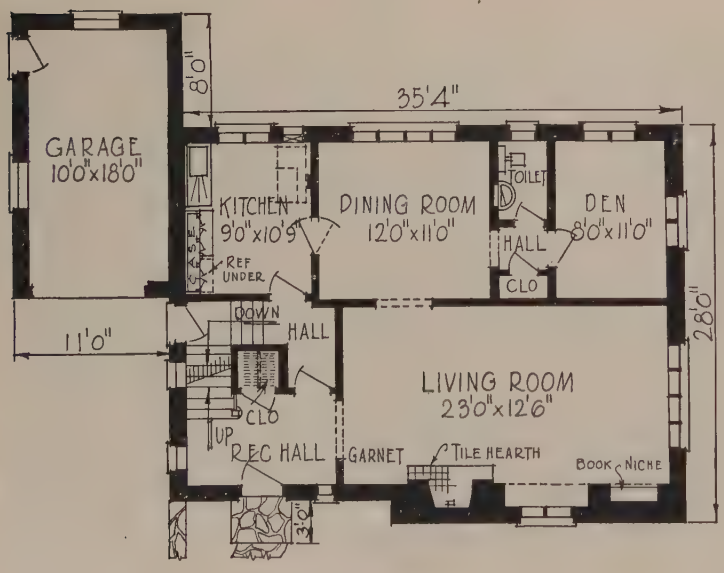
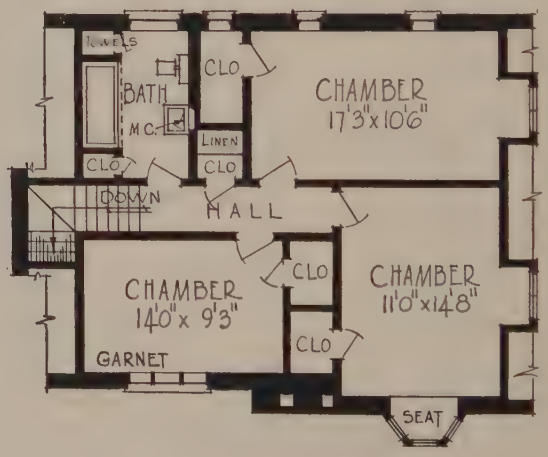
6 Rooms, Bath, Toilet, Den and Garage

The GARNET

A DELIGHTFUL home with a built-on garage, substantially built of common brick and replete with every modern convenience. The living room has a cozy fireplace. Kitchen cabinets are built-in. One bedroom has an oriel window with a neat built-in seat.





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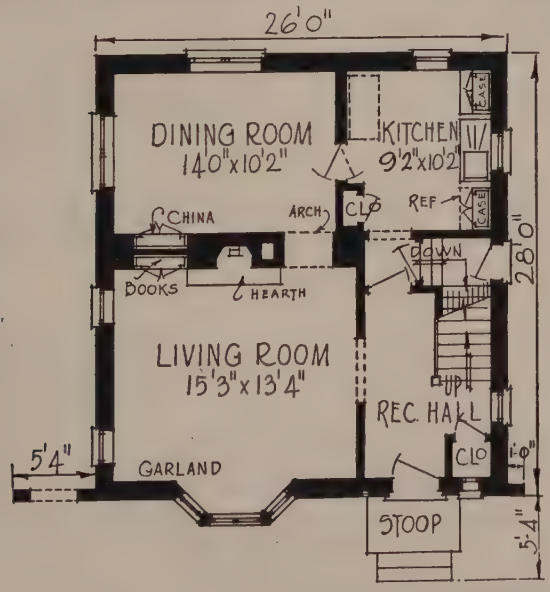
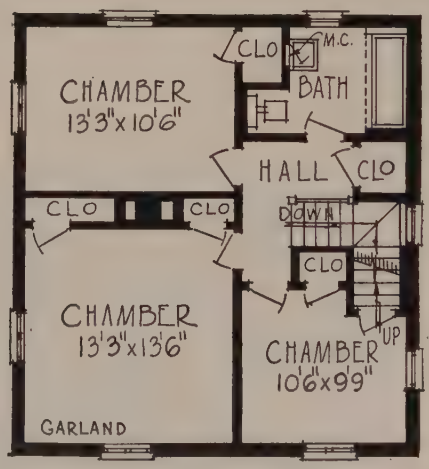
6 Rooms and Bath

The GARLAND

FACE BRICK in combination with stone and half-timbers unite to create the walls of this delightful home. The roof of shingles is interestingly broken into by the two attractive dormers. The living room has a bay and fireplace with built-in bookcase at side. The living room connects through an arch with the dining room which has built-in shelves for china. The kitchen is conveniently equipped with built-in cabinets at each side of the sink.





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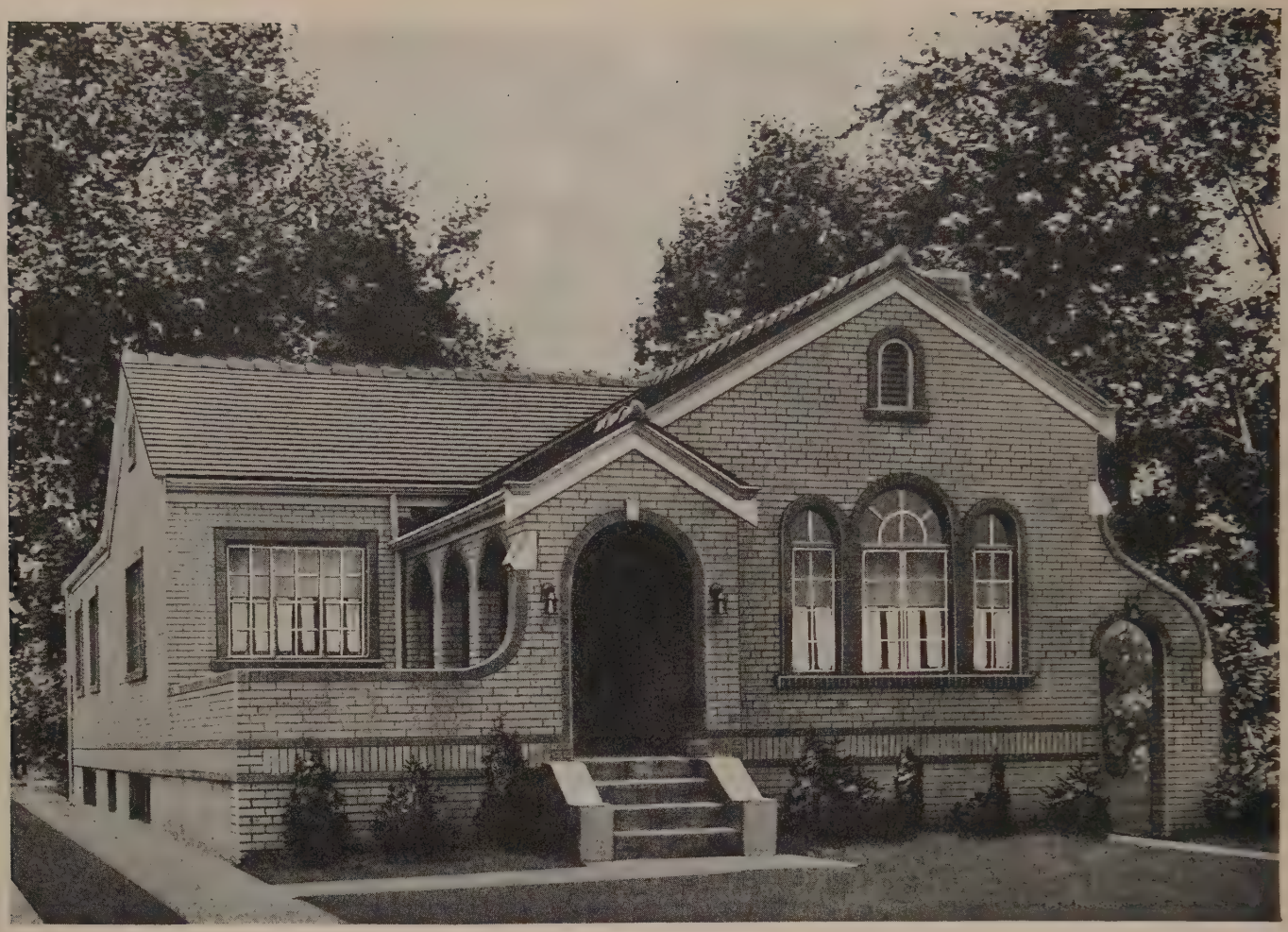
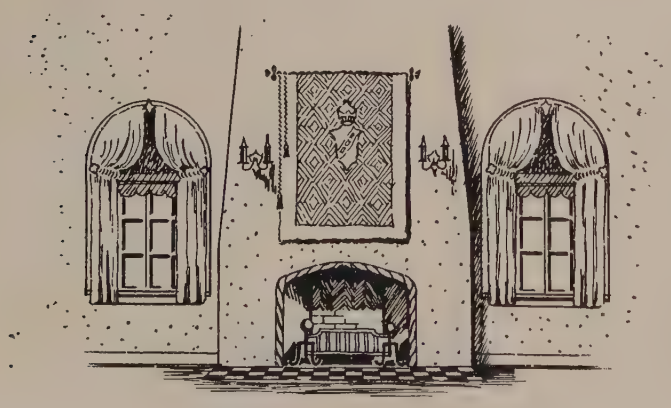


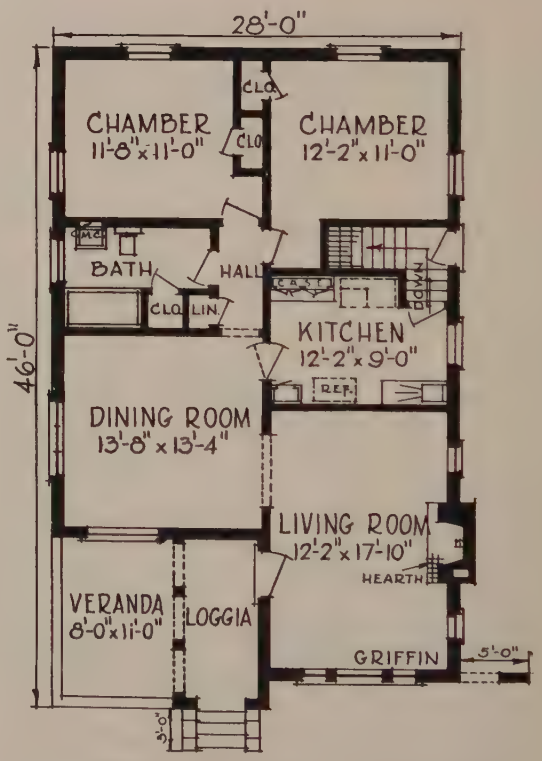
5 Rooms and Bath

The GRIFFIN

HERE is an unusual bungalow built of face brick, with attractive walled veranda, and loggia, and an archway at the right. There is an inviting entrance and a splendid treatment of windows. The living room has fireplace, and the efficiency kitchen has built-in cabinets. There is a bath with built-in closet, two large chambers, each with closet, and a linen closet located in hall.



An attractive fireplace and well located window



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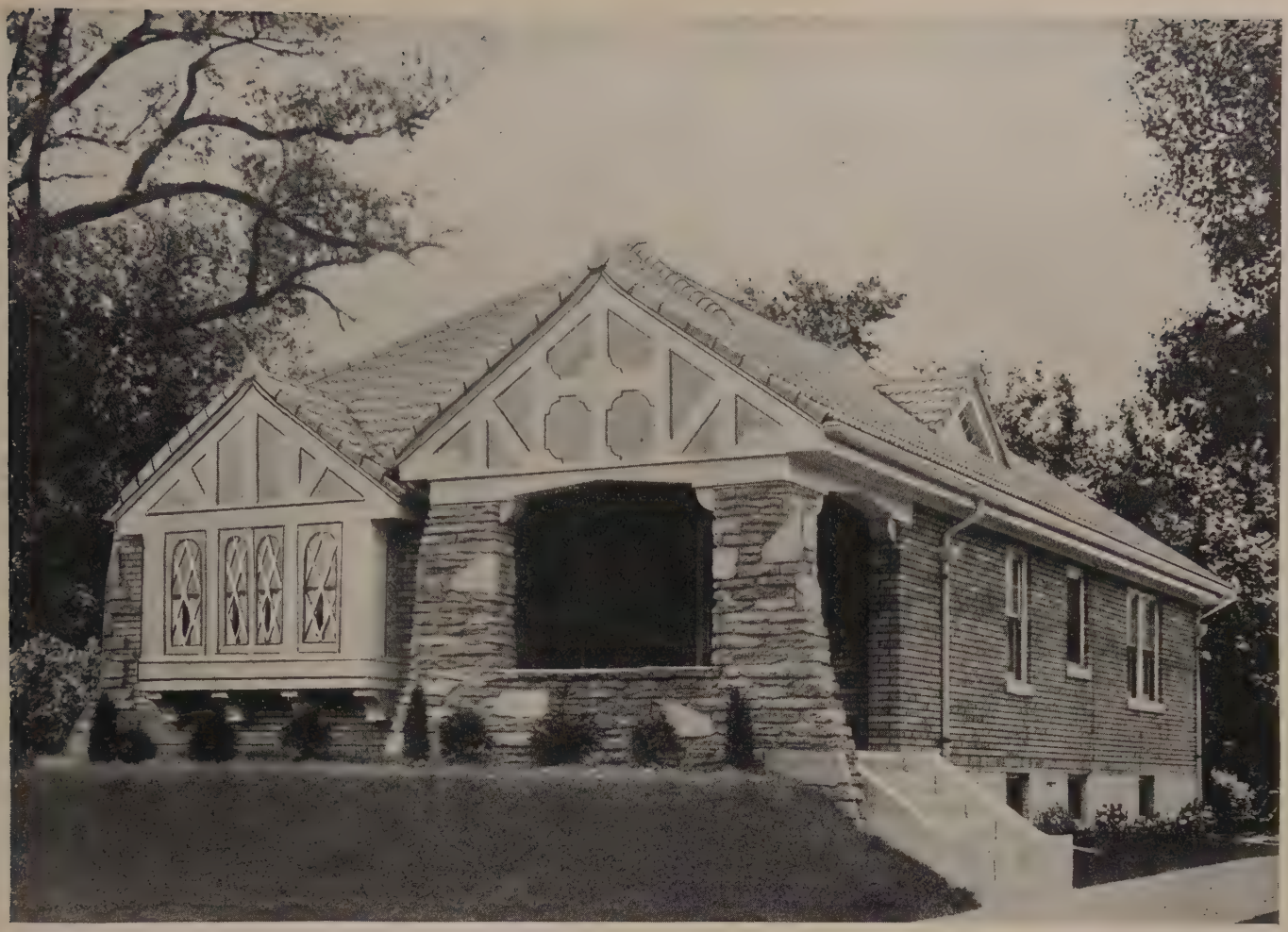
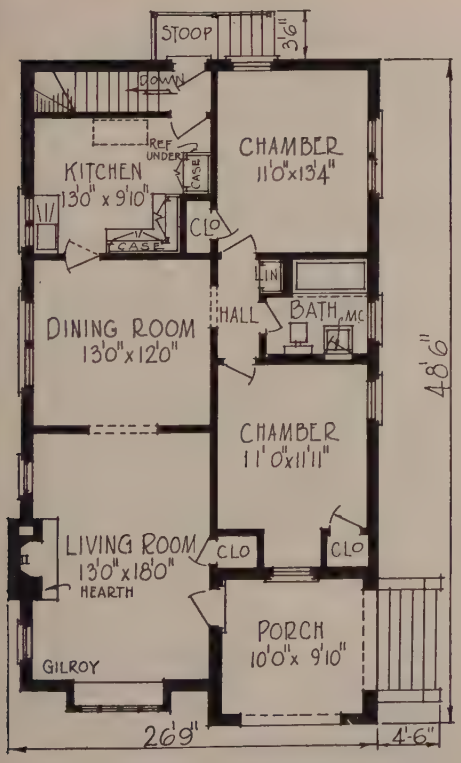


5 Rooms and Bath

The GILROY

FACE BRICK combined with stone and stucco for walls, stone for columns of porch, a tiled roof and attractive bay window are harmoniously blended. The large living room has a splendid fireplace and a large closet. The model kitchen has built-in cabinets. There are two large chambers each with a convenient clothes closet; a modern bathroom, built-in linen closet and many conveniences, to bring every home comfort.



Attractive trellises help to beautify the garden

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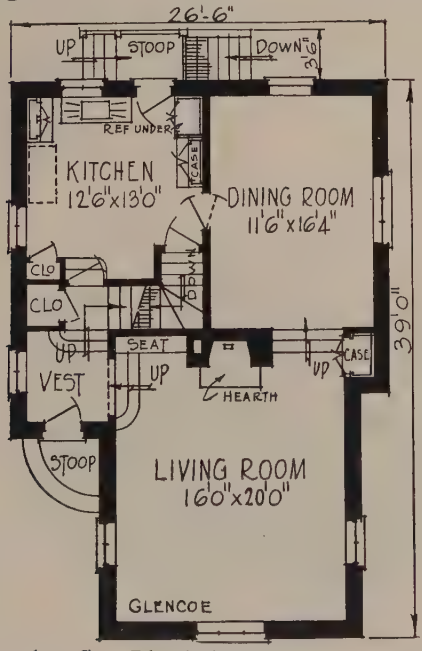
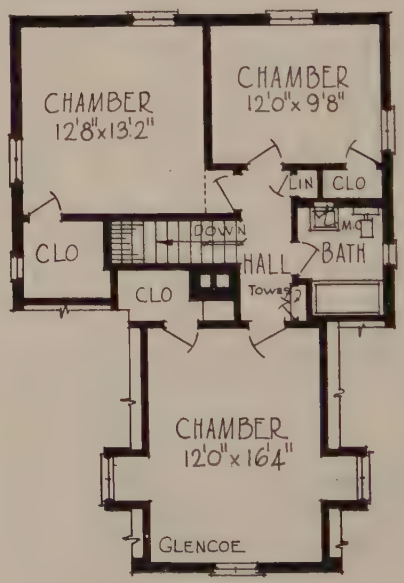
6 Rooms and Bath

The GLENCOE

An old English home of common brick compactly arranged with many built-in features including convenient kitchen cabinets, a built-in case between the dining and living room, a fireplace and a convenient seat. There are three large chambers.





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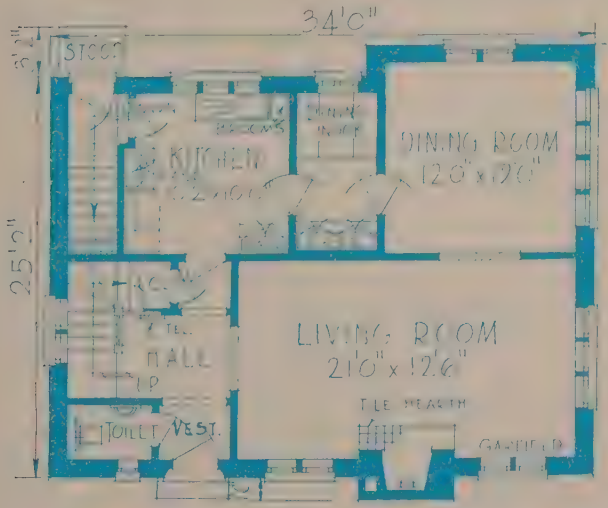
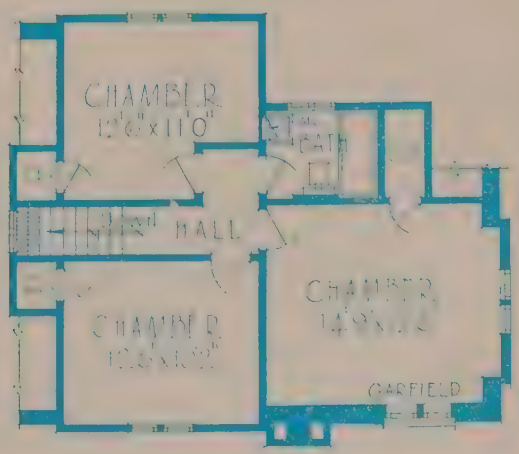
6 Rooms. Bath. Toilet and Dining Nook

The GARFIELD

A PLEASING exterior composed of stucco, face brick, half timber and stone work. Appropriate casement type windows give much light and air to a well arranged interior. The living room, containing a natural fireplace with tile hearth, connects with the hall at one end and the dining room in the rear. A dining nook and built-in cases occupy the pantry. Many built-in conveniences are provided for in the kitchen. A telephone cabinet in the downstairs hall and a toilet off the vestibule are desirable features.





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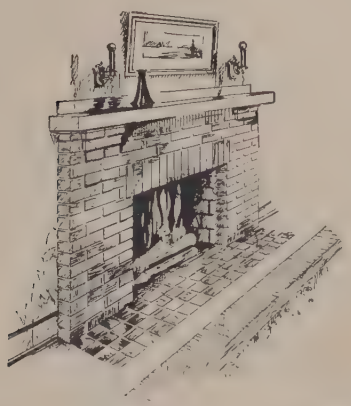
5 Rooms and Bath

The FLANDERS

COMMON brick gives the rugged, substantial look to this attractive home. The quaint entrance opens to a conveniently planned interior, with its built-in kitchen cabinets, dining set, and disappearing stairway.



Make your living room more inviting. Install a good fireplace.

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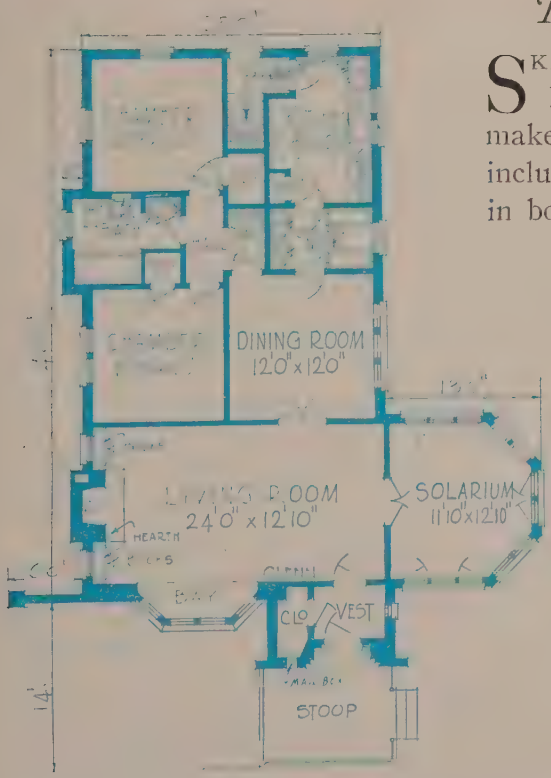
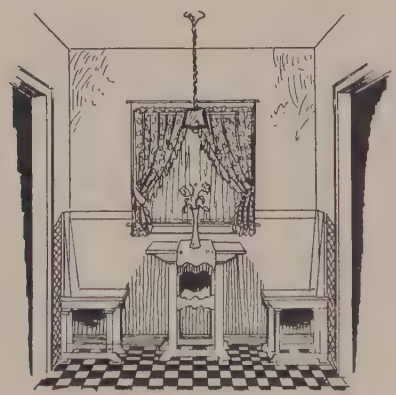
5 Rooms, Bath, Dining Nook and Solarium

The GLENN

SKILLFULLY laid face brick walls decorated with stucco and half-timber at one gable, and a variegated shingle roof make this charming exterior. The excellently arranged interior includes many built-in kitchen conveniences, fireplace with built-in bookcases at each side, built-in mail box and dining nook.





Built-in dining sets save time and trouble.

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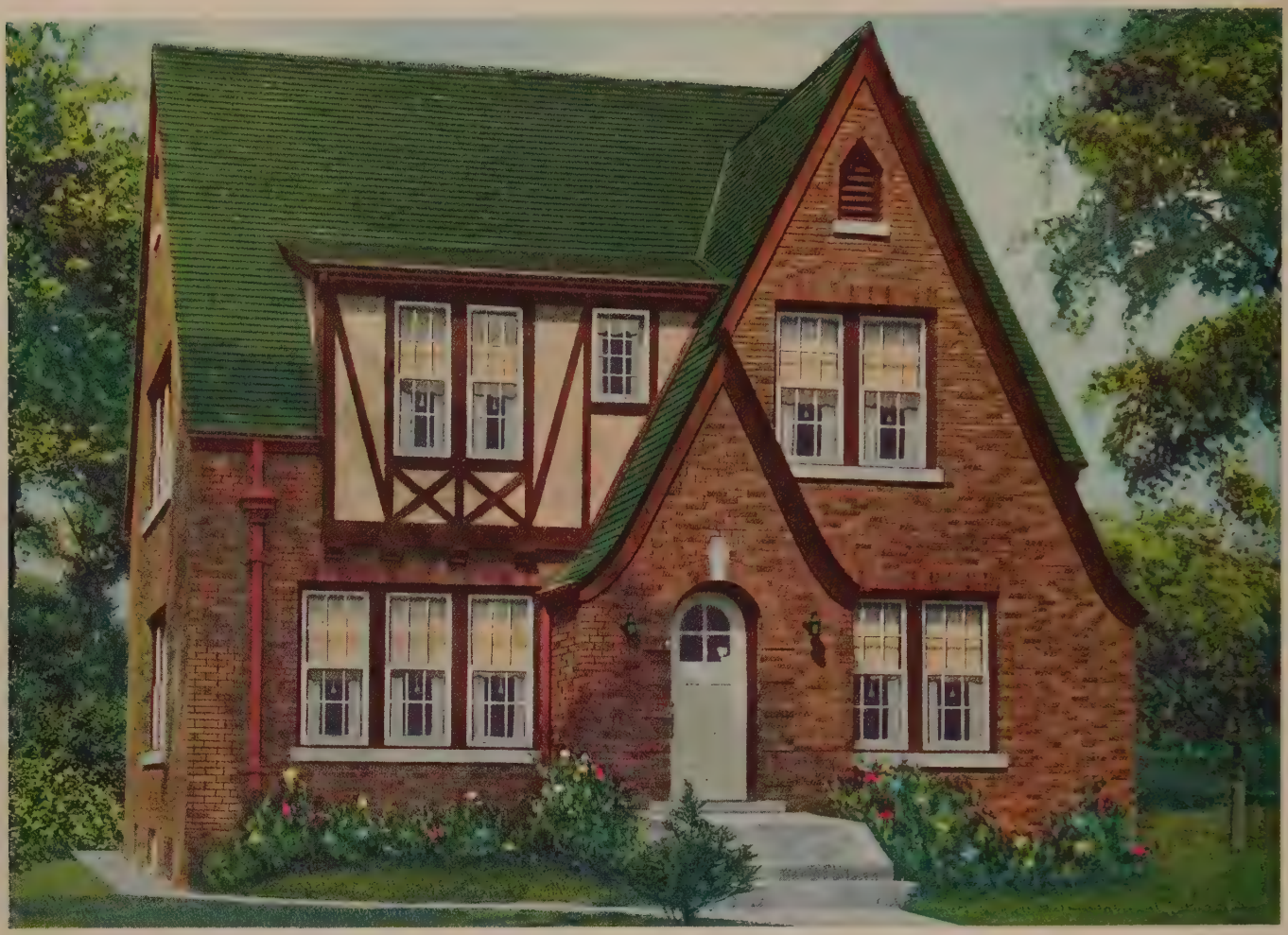
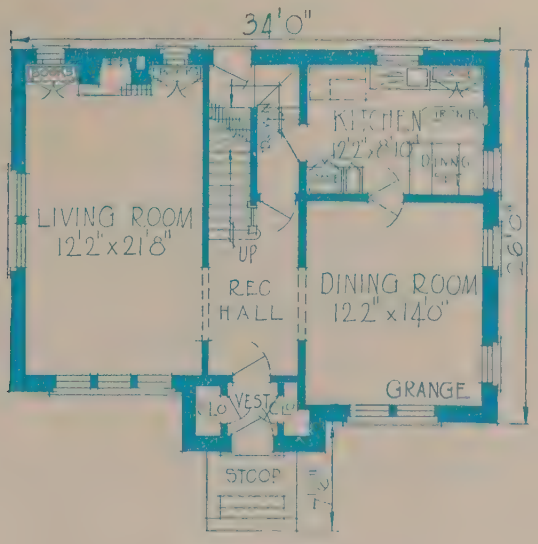
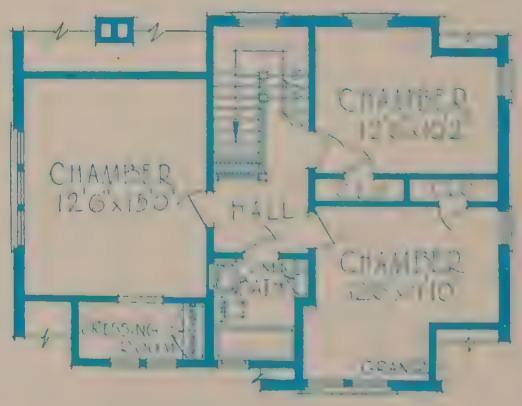


6 Rooms and Bath

The GRANGE

A BRICK house with shingled roof employing the autumn greens and browns for color. Perfect balance of windows and door openings, modified by the sloping lines of gables and half timbers. The living room has a natural fireplace in the rear wall with built-in bookcases on each side. The kitchen has built-in dining set, ironing board and cases. One of the bedrooms has a dressing room with a built-in wardrobe.





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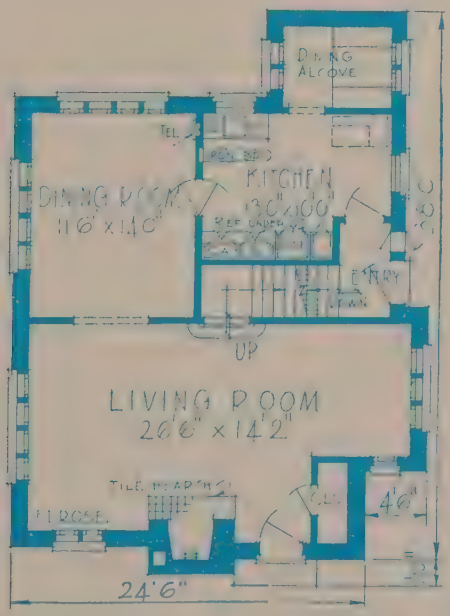
6 Rooms, Bath, Alcove and Dining Alcove

The ELROSE

FACE brick, rustic siding, stucco, half timbers and natural stone blend well with this Tudor house. Living room has natural fireplace. Built-in conveniences include kitchen cases, ironing board, telephone cabinet, and disappearing bed. A window seat in one bedroom and cedar lined closet in another, are features worthy of mention.



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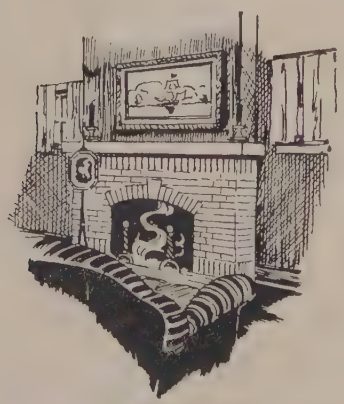
5 Rooms and Bath

The EDMORE

A COLORFUL and altogether charming home. Walls of face brick, stone, stucco and half-timbers support a tile roof. Within, there is a natural fireplace, and many built-in conveniences including kitchen cabinets, dining set, and telephone cabinet. Note the attic stair.



Nothing takes the place of a fireplace.

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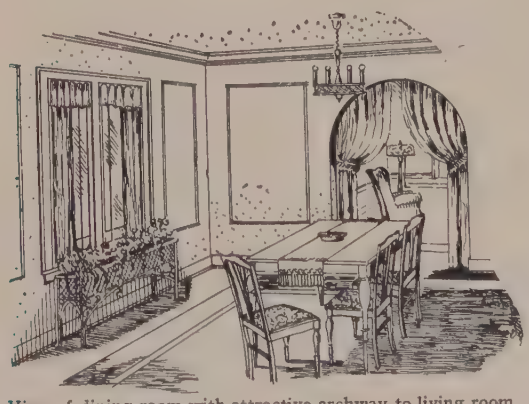
5 Rooms, Bath and Dining Nook

The GOWINS

THIS striking home, built of brick, with shingle roof, presents an unusually pleasing appearance. It is entirely convenient and comfortable within having many built-in convenience features, including dining nook, kitchen cabinets, telephone cabinet, etc. Note the window groupings, bricked terrace and oriel window.



View of dining room with attractive archway to living room.

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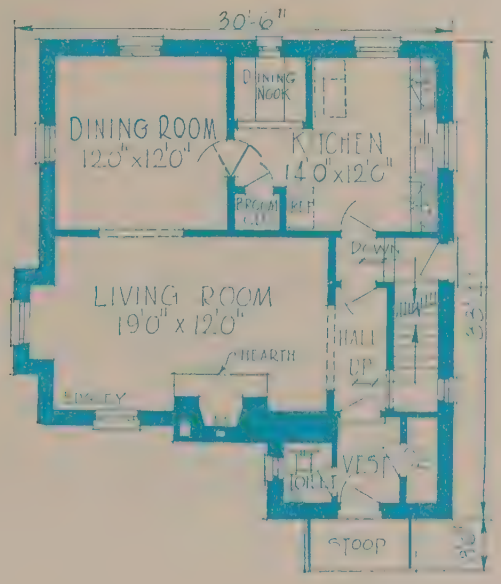
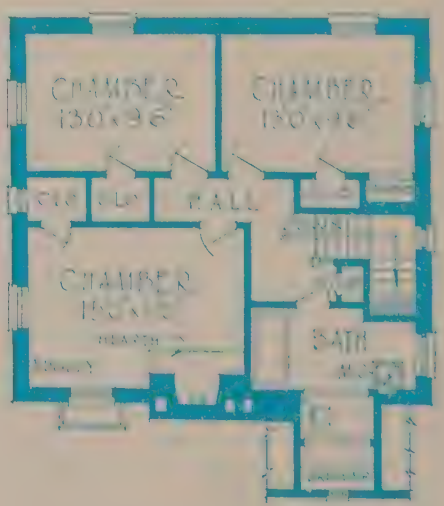
6 Rooms, Bath and Dining Nook

The EDGLEY

COMMON brick, skillfully laid, and used for walls and chimney harmonizes effectively with the tile roof of this home. The living room and front bedroom have natural fireplaces. Kitchen units, bathroom dresser and bookshelves in one of the back bedrooms are built-in. A vestibule toilet and dining nook are desirable features of this home.





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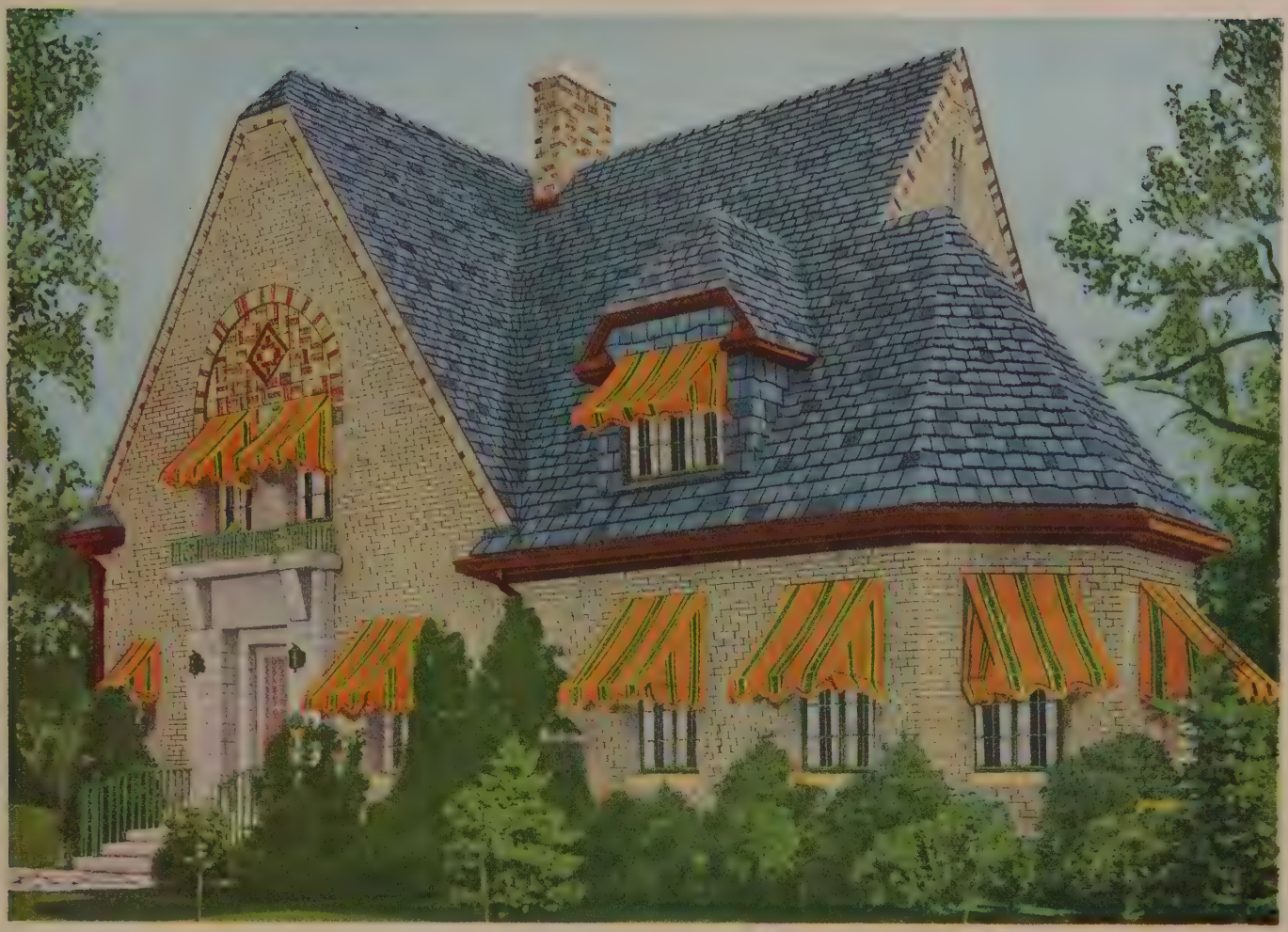
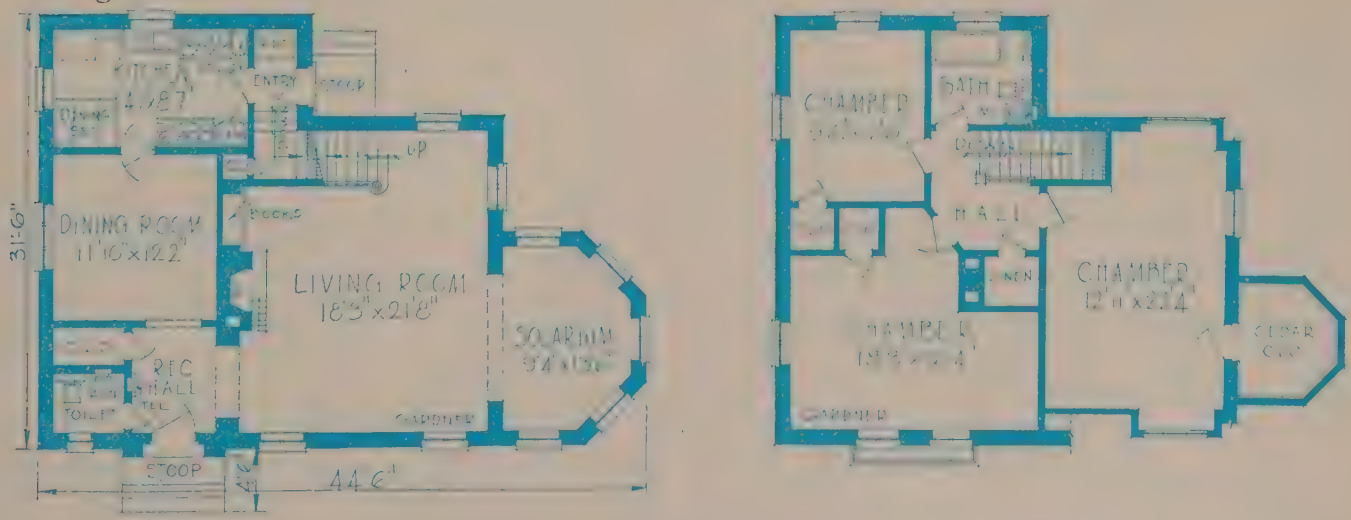


6 Rooms, Bath, Toilet and Solarium

The GARDNER

THIS odd shaped house with its face brick walls and slate roof imparts that charm and distinction sought for by home builders. The stone decorated door with balconied windows above constitute an inviting entrance. The living room with natural fireplace and built-in book shelves opens directly into a many windowed solarium. A dining set, kitchen conveniences and a reception hall telephone cabinet are built-in. Note the large cedar lined storage closet on second floor that provides a safe place for hanging unused clothes.



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6 Rooms, Sun Parlor, Den and 2 Baths

The GILBERT

THE BEAUTY of the rich colorful brick is further enhanced by the massive chimney and retaining walls of stone. Look at the floor plans. Note the many built-in features —the two baths on second floor, each with its wall heater—the smoke and odor eliminating ventilating fan in the model kitchen that utilizes so many features to save labor and bring convenience. It is homes of this type that bring the greatest satisfaction.

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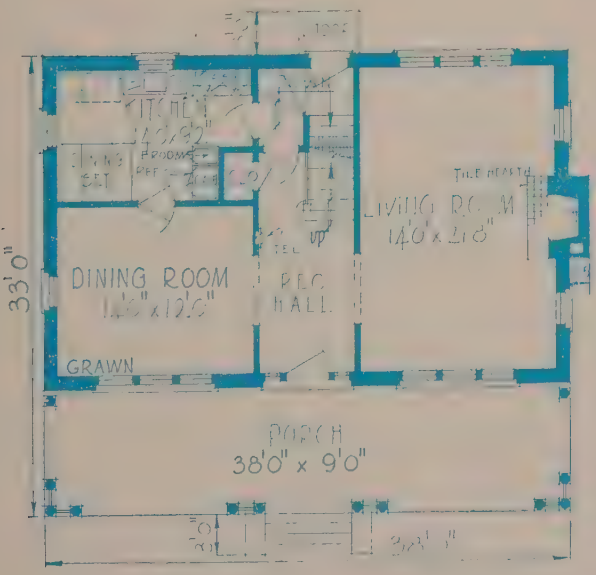
6 Rooms and Bath

The GRAWN

WALLS and shingled roof of the gambrel type with dormer. The white stone trim and wood porch columns and trellises set off the color of the face brick walls. There is a natural fireplace in a roomy living room, a sewing room on the second floor and a light cheerful kitchen with its built-in dining set and other conveniences.



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6 Rooms, Bath and Dressing Closet

The ELK

STUCCO and half timber on the gables adds materially to the attractiveness of this face brick home. The living room contains a massive fireplace. The kitchen is conveniently outfitted with many built-in units. The extra large dressing closet is appreciated.

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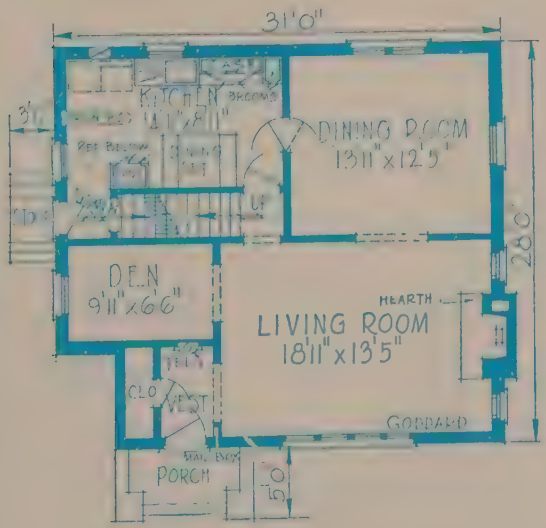
5 Rooms, Bath, Den and Dressing Alcove

The GODDARD

FACE brick walls and shingled roof, a massive chimney and attractive gables make this interesting exterior. The living room has natural fireplace. Dining set, ironing board, kitchen cases, telephone cabinet and mail box are built-in. A den off the living room and a dressing alcove connected with the front bedroom are included in these plans.



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6 Rooms, Bath, Alcove and Sun Room

The GALENA

THIS unusual exterior is of face brick walls relieved with stucco and half timbers and decorative stone work. The unique method of roof shingling is in keeping with the general architectural treatment. Good sized rooms well arranged comprise an interior replete with every modern convenience including built-in dining set and kitchen units. A fireplace brightens the living room and a large alcove connects with one of the bedrooms.

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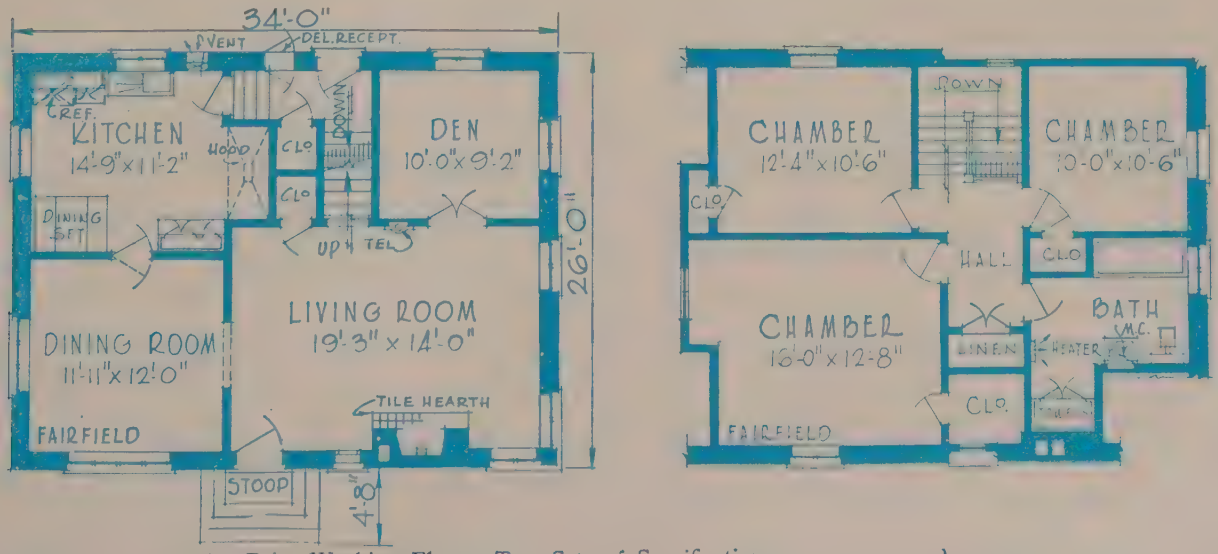
6 Rooms, Bath and Den

The FAIRFIELD

THIS HOME has walls of variegated brick, siding on the gables, and shingled roof. Casement windows, inviting doorway and prominent chimney add to its appearance. The living room has natural fireplace and built-in telephone cabinet. Plans also provide for hooded range in kitchen, ventilator, built-in dining set and other kitchen units; linen closet, built-in bathroom wall heater and towel cabinet that provides convenient, easy storage.



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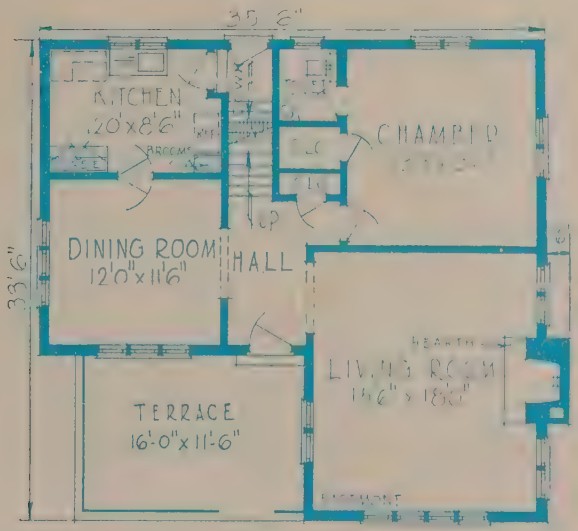
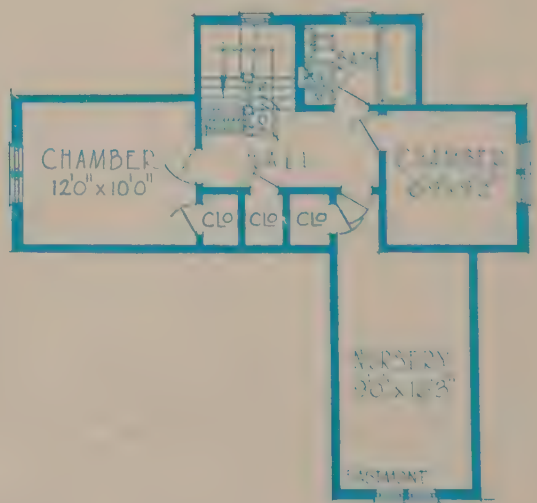
6 Rooms, Bath, Toilet and Nursery

The EASTMONT

STRUCTURAL clay tile has been used for the walls of this delightfully simple house. The "L" shaped gabled roof is shingled. The carefully designed interior arrangement utilizes every inch of space to give the utmost in living comfort. In the kitchen are built-in cases and broom closet. Bedroom on the first floor has its own toilet. Extra room over the living room may be utilized for nursery or other purpose. Living room has a fireplace.





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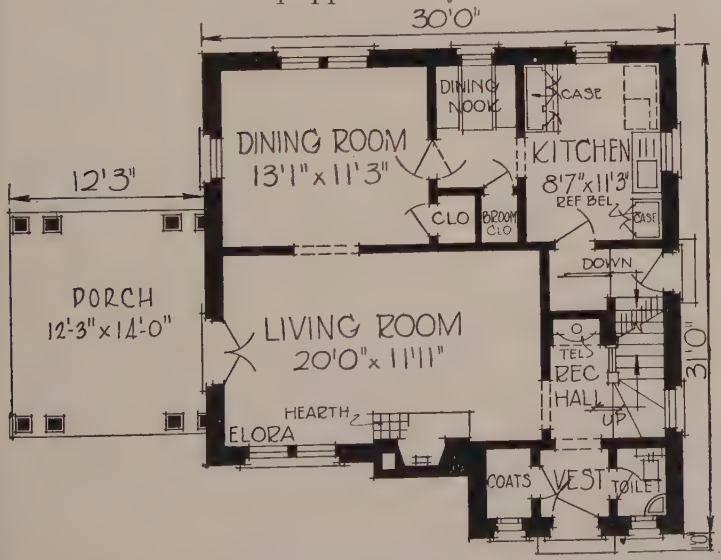
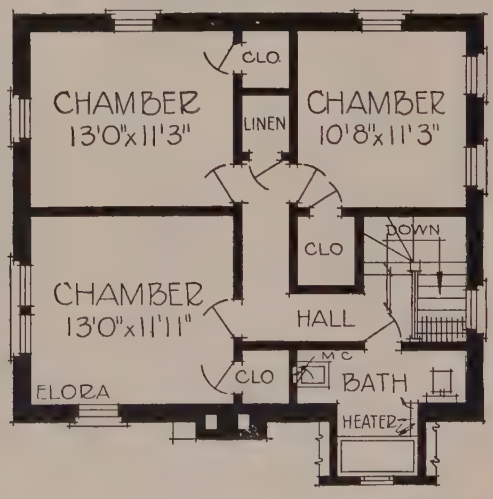
6 Rooms, Bath, Toilet and Dining Nook

The ELORA

OF FACE brick with asphalt shingle roof, this home is unusually attractive. Notice the stuccoed gable over entrance, the large porch off living room, the side entrance into kitchen. There is a dining nook between kitchen and dining room and a large broom closet. There is built-in phone cabinet and toilet on first floor. Living room is large and is provided with an attractive fireplace. Upstairs rooms are large and well arranged. Bathroom is equipped with a built-in wall heater.





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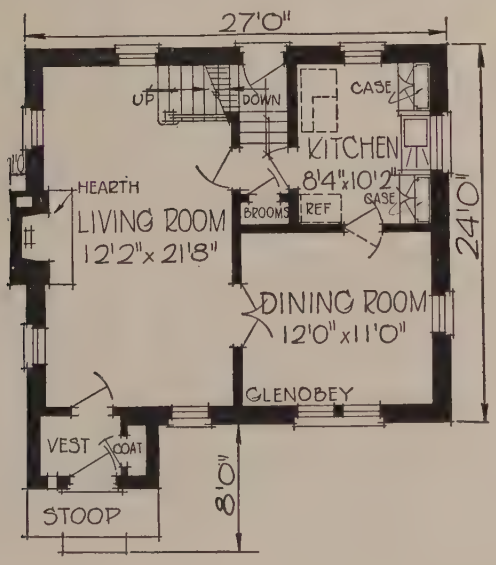
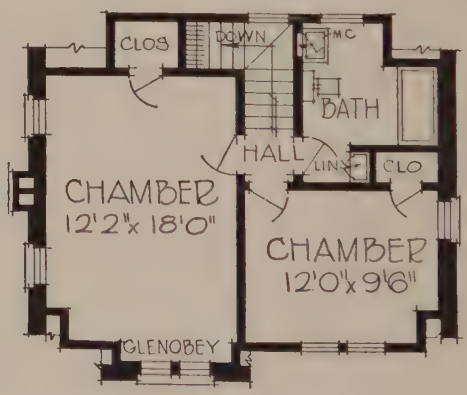
The GLENOBEY

A HOME of interesting appearance with its unconventional roof and mingled face brick walls. Stucco and half-timbers at the dormers. An attractive entrance opens into a living room equipped with fireplace. The light cheerful kitchen contains built-in cabinets on each side of the sink. The interior is planned with two good sized bedrooms.





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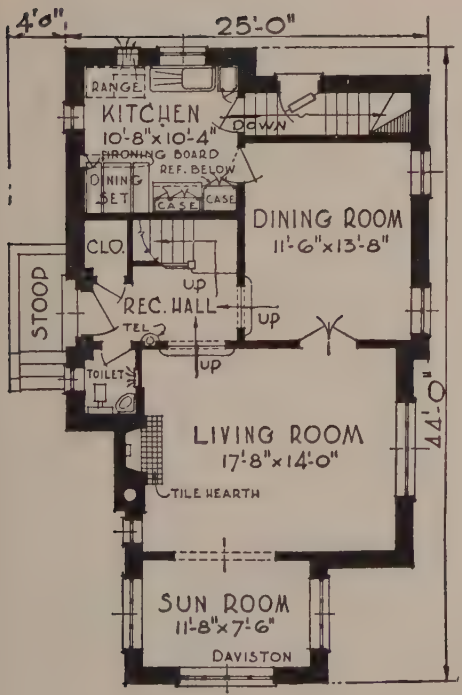
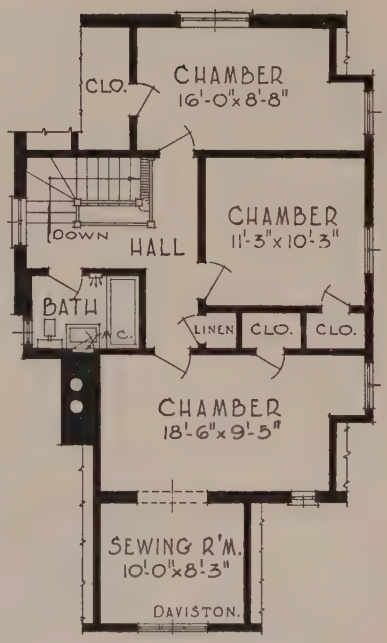
6 Rooms, Bath, Toilet, Sun Room and Sewing Room

The DAVISTON



A COMMON brick home of rare beauty. The stucco and half timbered second story is an English touch which considerably enhances its general appearance. A careful study of the floor plans will convince you of the convenience and comfort of this home.



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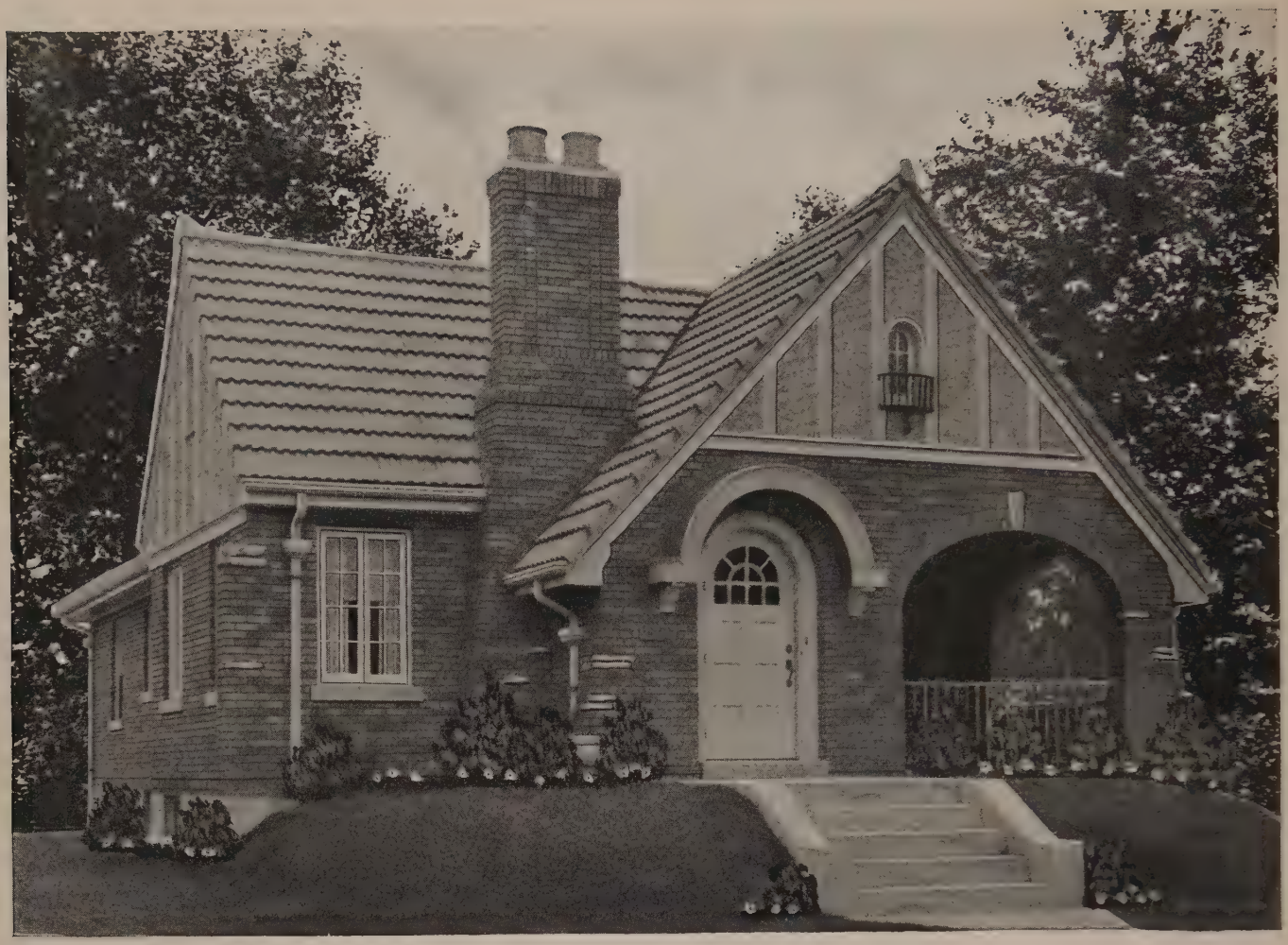
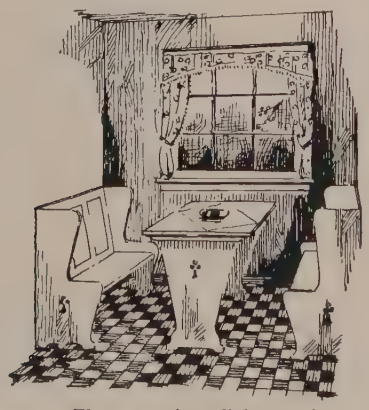


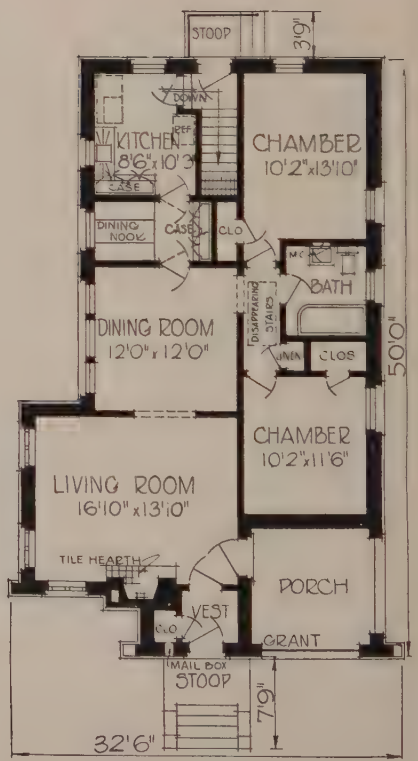
5 Rooms, Bath and Dining Nook

The GRANT

FACE BRICK and a tile roof, with half timbered stucco at gable are combined to create this attractive exterior. There is an open porch with ornamental iron railing and a balconied window in upper part of gable. There is a massive chimney and an inviting entrance. Inside rooms are comfortable and well arranged. Living room has tiled fireplace hearth and there is an efficiency kitchen with adjoining dining nook. Two chambers, a model bathroom, linen and clothes closets, and a disappearing stairway that affords easy access to the attic, complete this splendid arrangement.



The convenient dining nook



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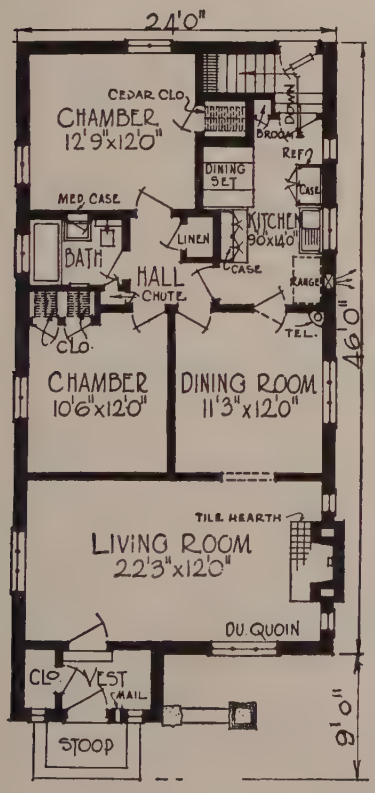
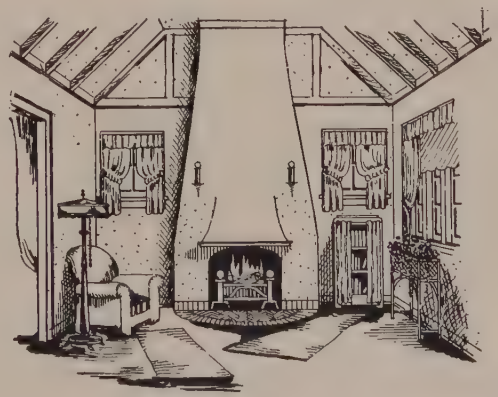
5 Rooms and Bath



The DU QUOIN

SPACE does not permit a complete enumeration of the many striking features of this home. A few points we must bring out are the variegated asphalt shingles of roof, delivery receptacle, modern efficiency kitchen and numerous built-in features such as the built-in mail box and breakfast nook.



Interior of Living Room

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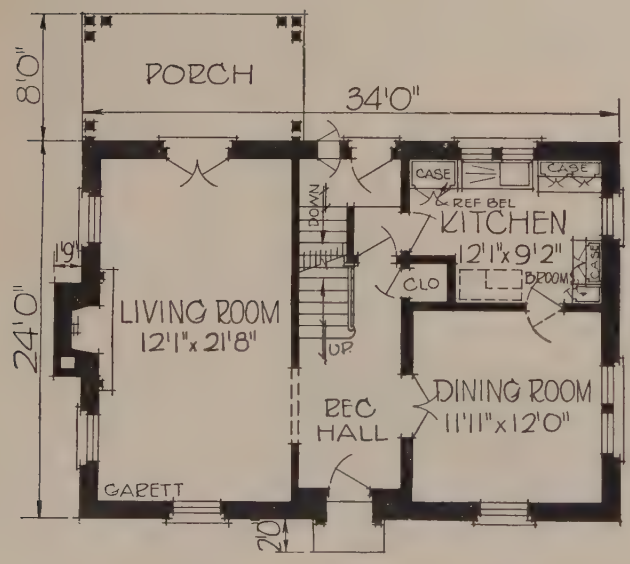
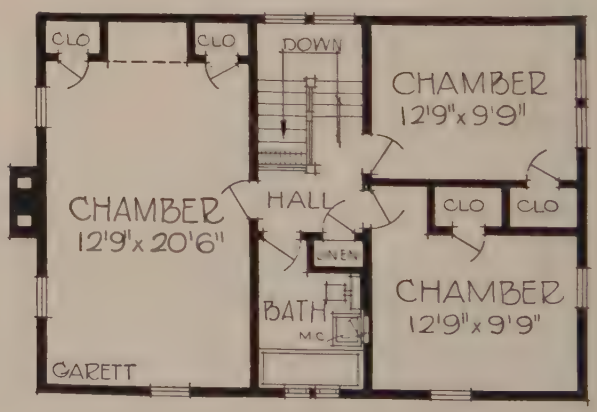
6 Rooms and Bath

The GARETT

FACE BRICK used for the first story wall and the chimney combine with gray siding to make this smart looking home. The effective entrance and front dormers lend interest to the front wall. The living room has a fireplace and opens onto a large rear porch. The kitchen is well planned and equipped with convenient, useful built-in cabinets.





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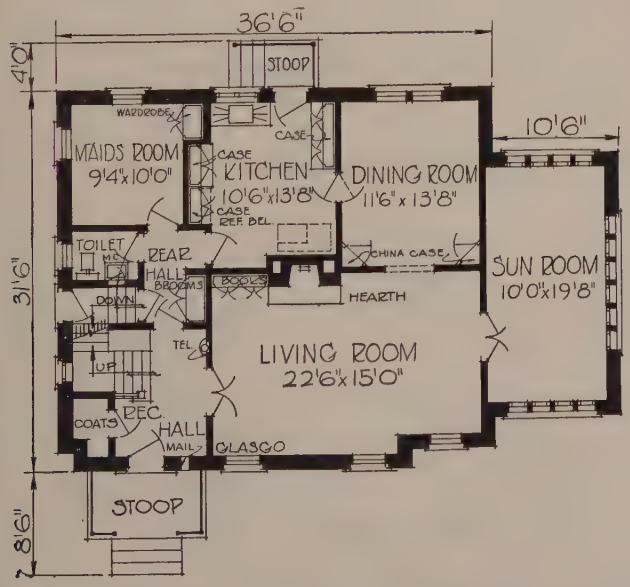
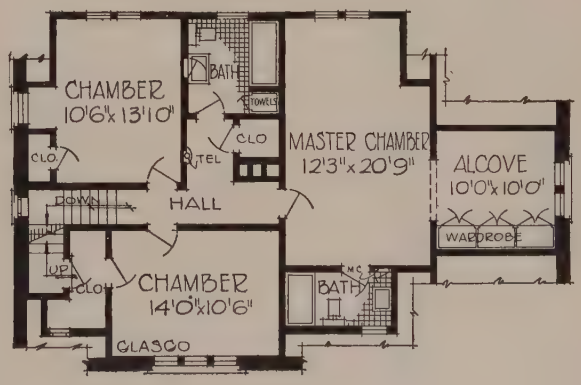
7 Rooms, 2 Baths, Toilet, Alcove and Sun Room

The GLASGO

FACE brick combined with the effective thatched roof presents a pleasing picture of unusual charm. There is a splendid arrangement of windows that permit plenty of light. The efficiency kitchen adjoins the maid's room and is convenient to the toilet. Dining room has built-in china cabinets. Second floor includes a large master chamber with alcove, two smaller chambers and two baths.





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6 Rooms, Bath and Toilet

The DELAWARE

BUILT of face brick, the stately dignity of this attractive home will grace its community for generations. The handsome bay, enchancing the beauty of the living room, is but one detail of an exceptionally complete, thoroughly modern and convenient interior.

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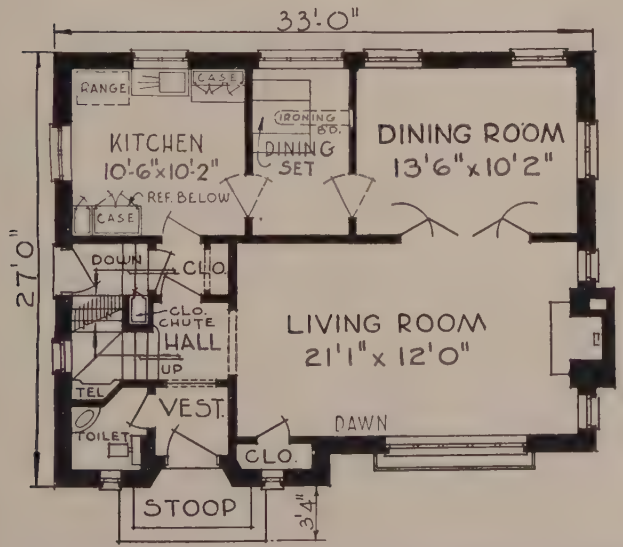
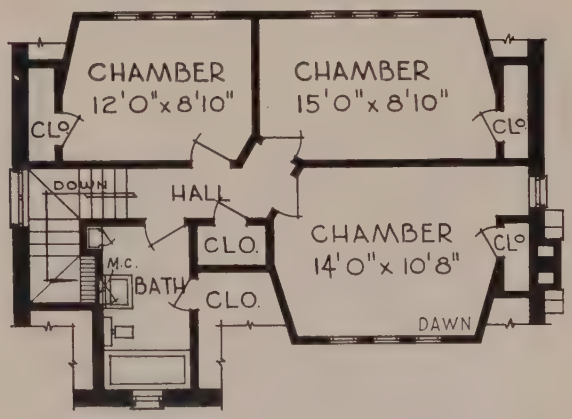
6 Rooms, Bath, Dining Nook and Toilet

The DAWN

AN ATTRACTIVE and substantially built home with solid brick outside walls and face brick for exterior surface. A generous use of steel sash throughout permits an abundance of light. The well arranged interior provides a toilet on first floor, built-in dining nook, phone cabinet and model kitchen. Three chambers and a bath upstairs.





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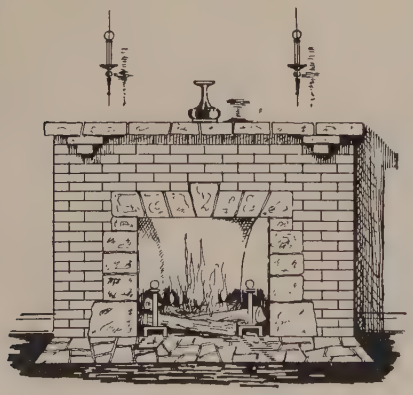
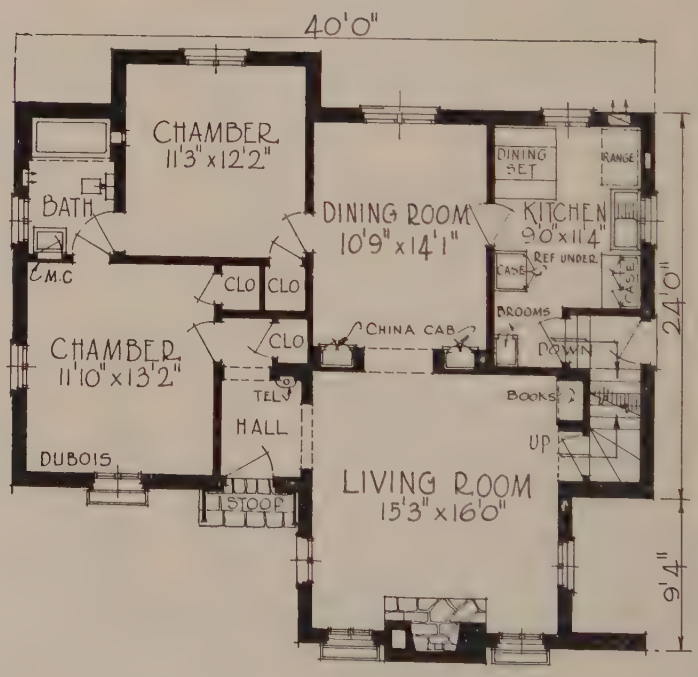
5 Rooms and Bath

The DUBOIS

THE striking chimney immediately attracts attention. Walls are of enduring face brick construction pleasingly touched with stone ornamentation. Rooms are well planned and carefully arranged to give a maximum of comfort and convenience.



Elevation of Fireplace



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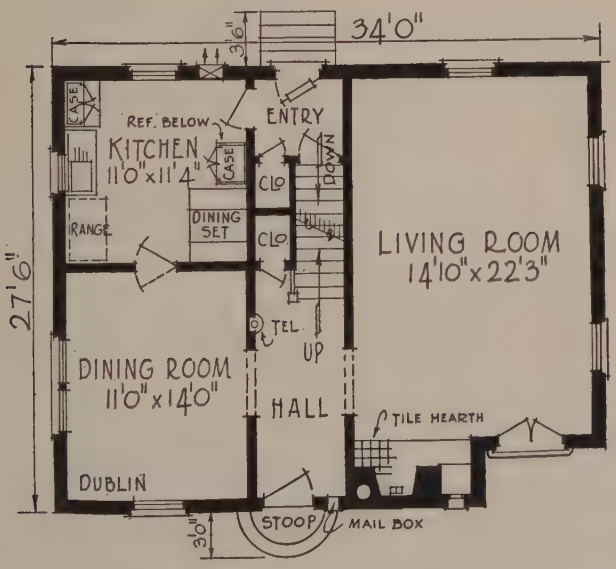
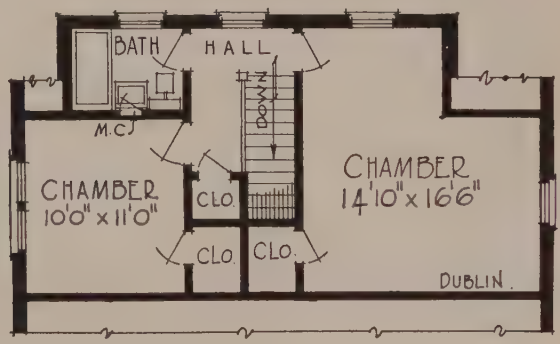
5 Rooms and Bath

The DUBLIN

A BUNGALOW of exceptional merit. Constructed of face brick. The attractive interior includes a large living room and such important conveniences as built-in dining set, phone cabinet and mail box. Both floors are well planned and of commodious size.





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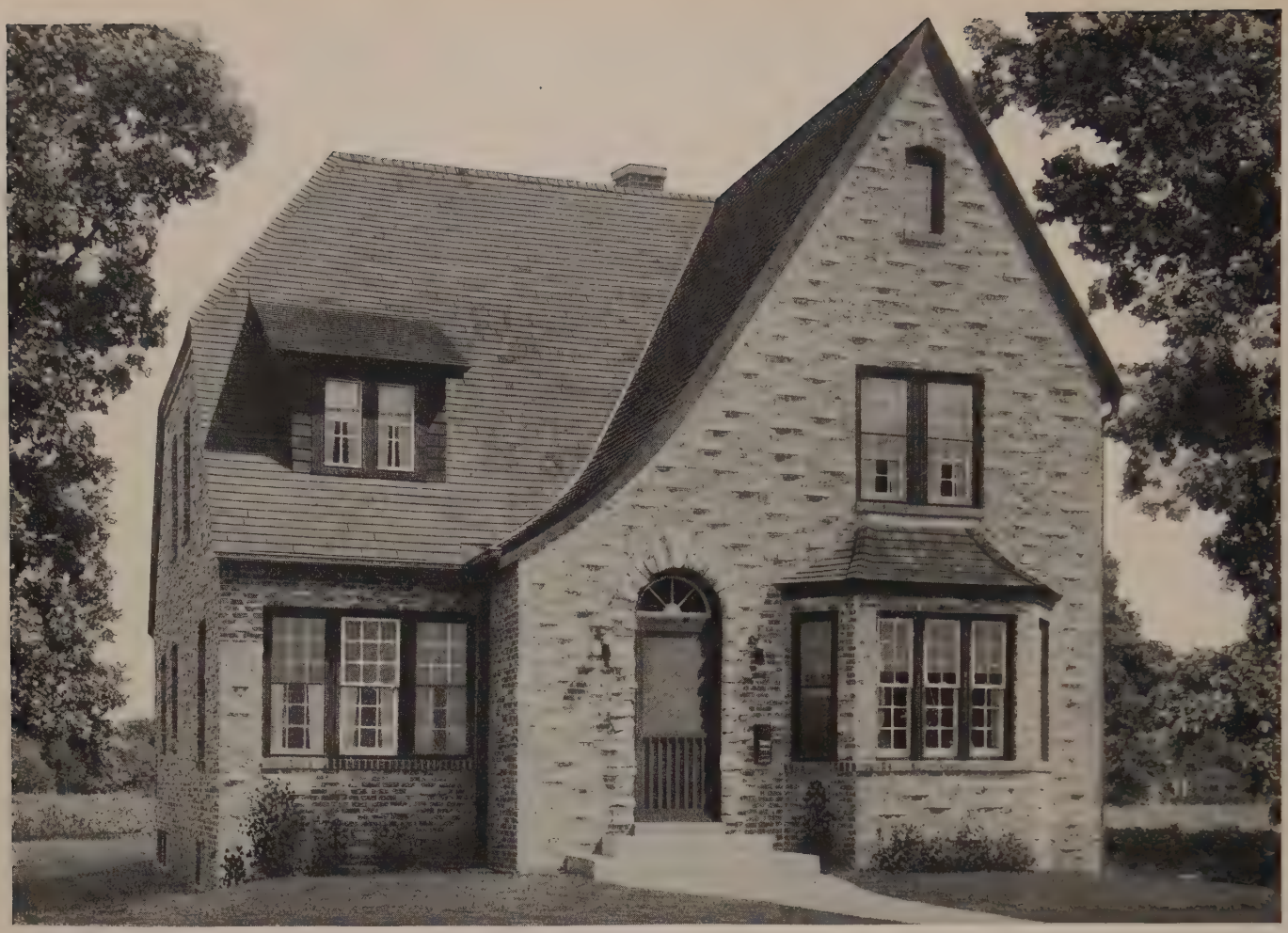
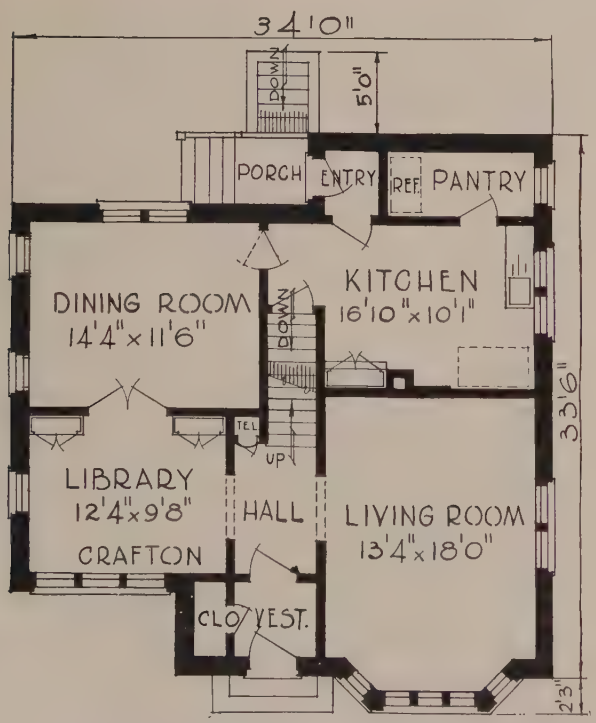
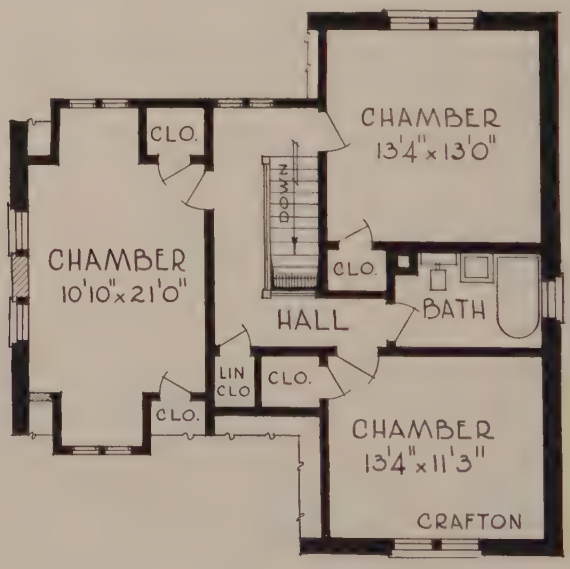


7 Rooms and Bath

The CRAFTON

THE outside walls are common brick laid to give the skintled effect at once artistic and pleasing. Note large rooms.





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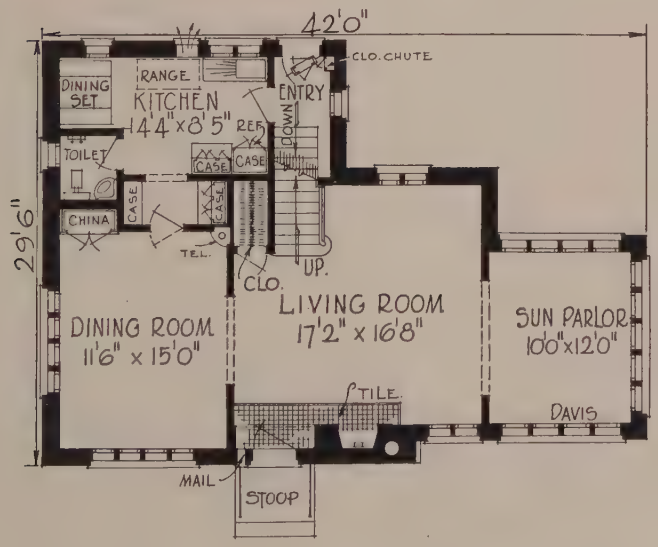
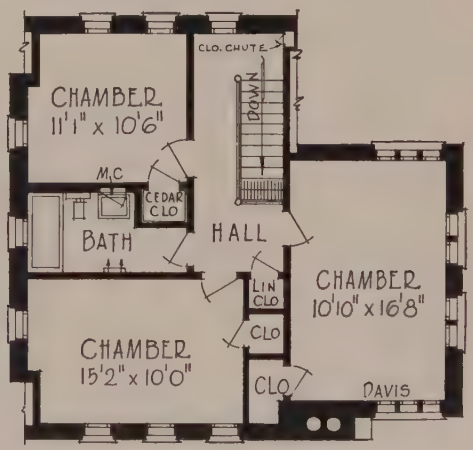
6 Rooms, Bath, Toilet and Sun Parlor

The DAVIS

THIS unusual home of brick has a blue-gray roof of slate which gives an added appeal to the striking roof lines. Rooms are well planned and there are many conveniences including cedar-lined clothes closets and a delivery receptacle in the rear door.





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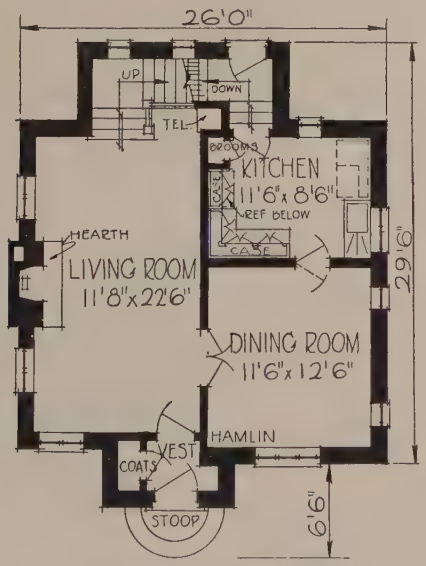
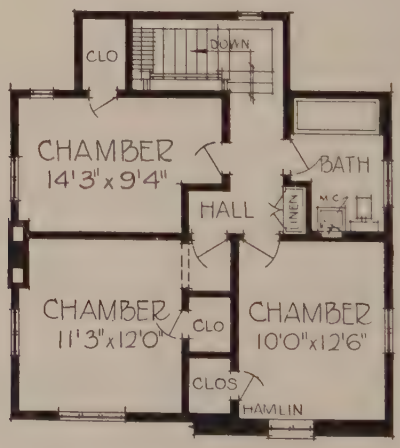
6 Rooms and Bath

The HAMLIN

THIS charming home is built of face brick and shingled walls with shingled roof. The well arranged interior includes a large living room with a fireplace and a conveniently arranged kitchen containing many built-in cabinets. A linen closet and a built-in telephone nook are also shown on the plans. The second floor offers three large chambers.





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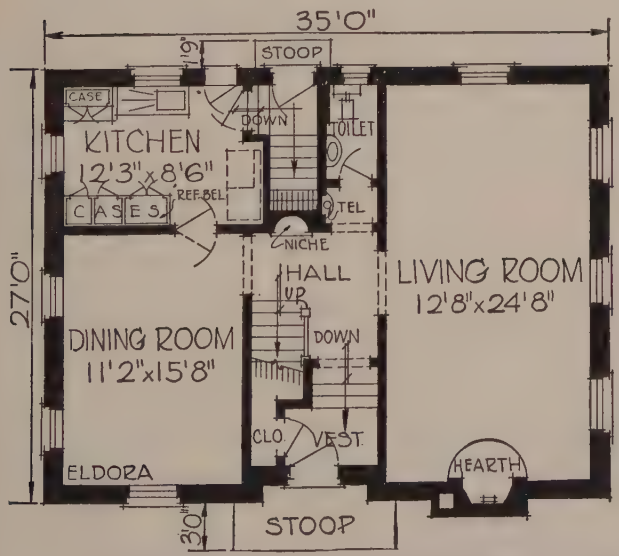
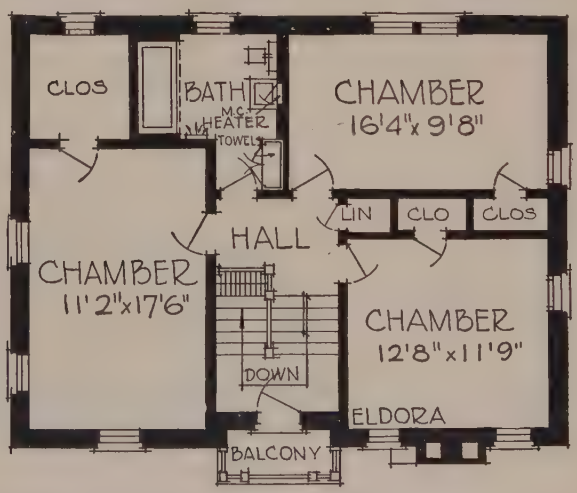
6 Rooms and Bath

The ELDORA

COMMON BRICK, painted white, with a clay tile roof form this unusually attractive exterior. Notice the inviting entrance with balcony above. A commodious living room with large fireplace and efficiency kitchen with built-in cabinets. An ornamental niche in the central hallway, built-in phone cabinet and toilet on first floor. Upstairs three large chambers. Model bathroom has built-in towel cabinet and electric wall heater.





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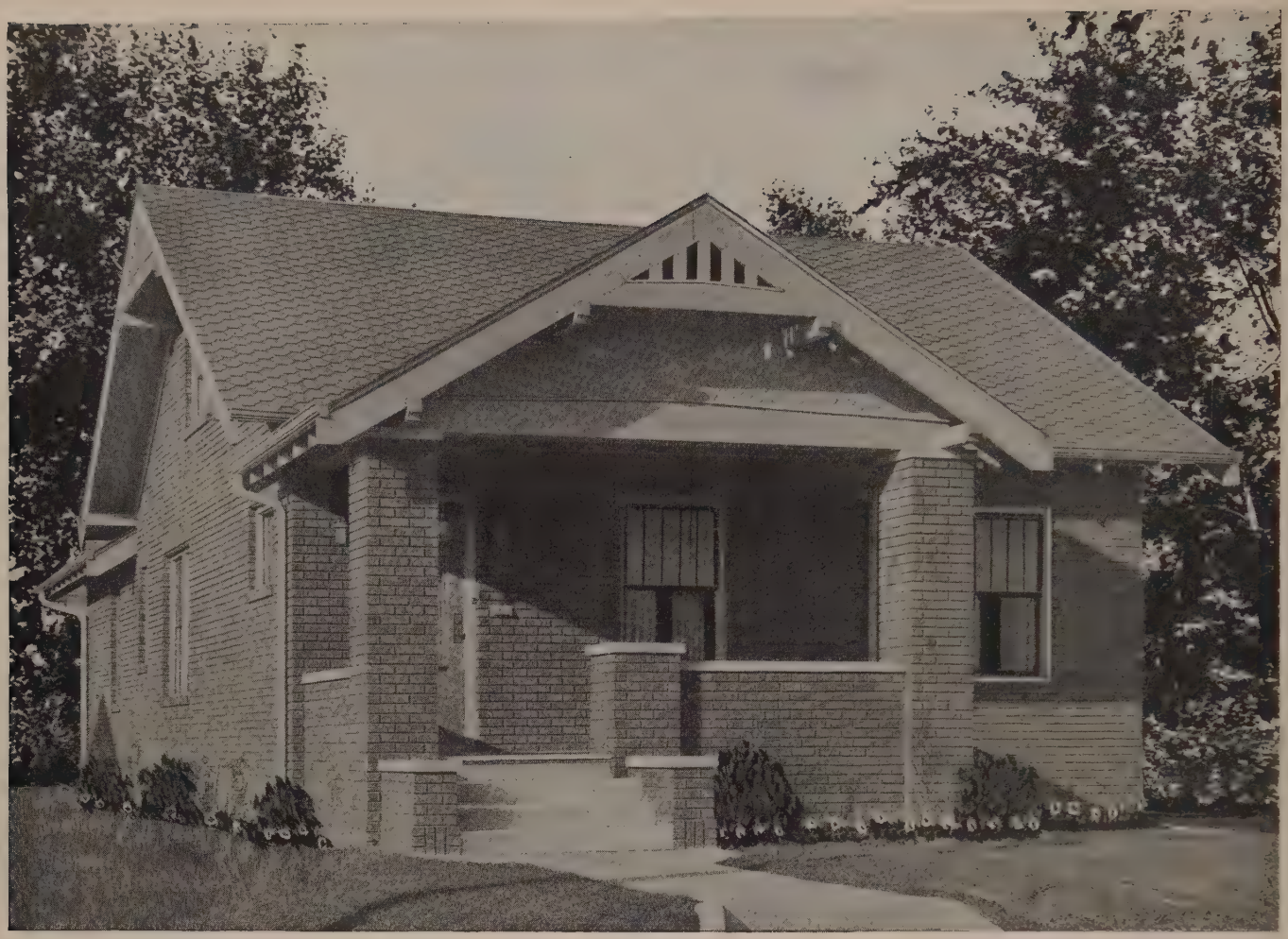
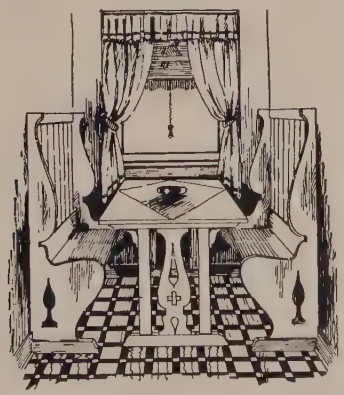


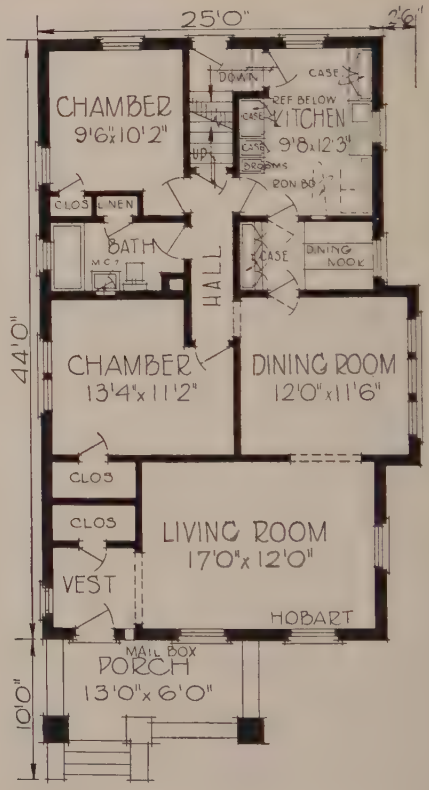
5 Rooms, Bath and Dining Nook

The HOBART

FACE BRICK is used for this attractive bungalow with its open porch and well planned interior. There is built-in mail box in vestibule and large closet. Dining nook, ironing board cabinet, broom cabinet, and efficiency cabinets in the kitchen. A model bath with built-in linen closet, two comfortable chambers each with closet and a central hall. Suitable for any location.



The cozy dining nook



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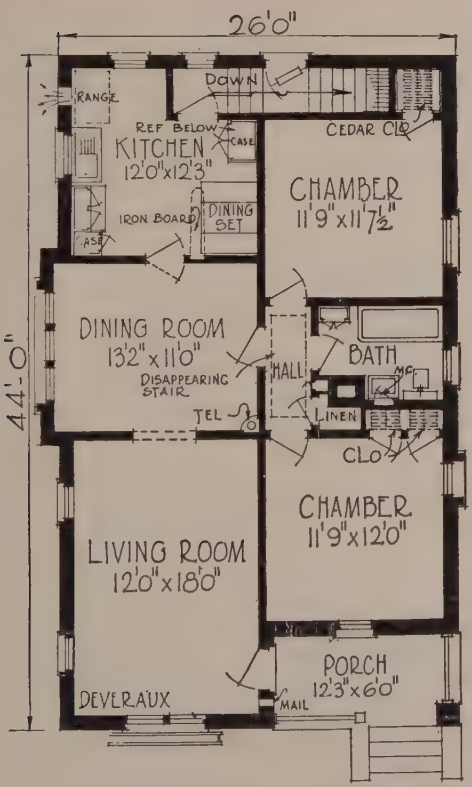
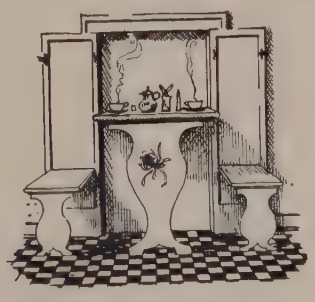
5 Rooms and Bath



The DEVERAUX

AN APPEALING bungalow of face brick construction, with asphalt shingle roof. A disappearing stairway leads to attic. The well-planned interior includes many built-in features, dining set, ironing board and kitchen cabinets, etc.



Disappearing or Folding Dining Set in Kitchen

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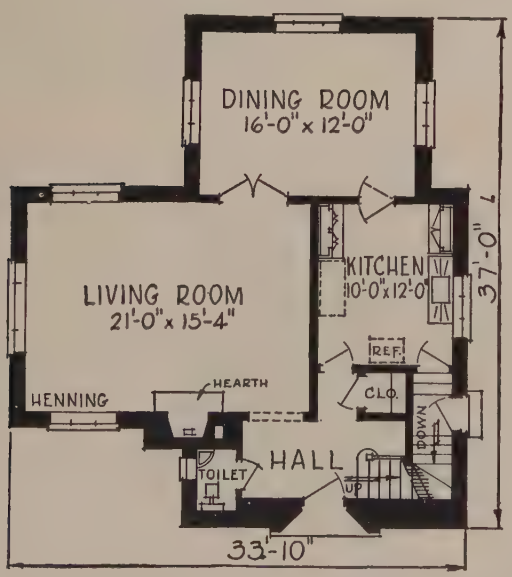
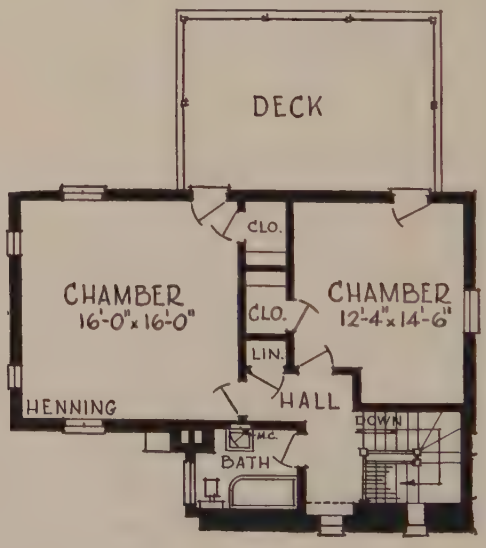
5 Rooms, Bath and Toilet

The HENNING

THE designer of this substantial and attractive home has utilized face brick for the walls with a touch of rustic siding at gables and dormer. The inviting front entrance is very effective. Notice toilet to left of entrance hall, living room with fireplace, and commodious dining room. Upstairs there are two chambers, one exceptionally large.





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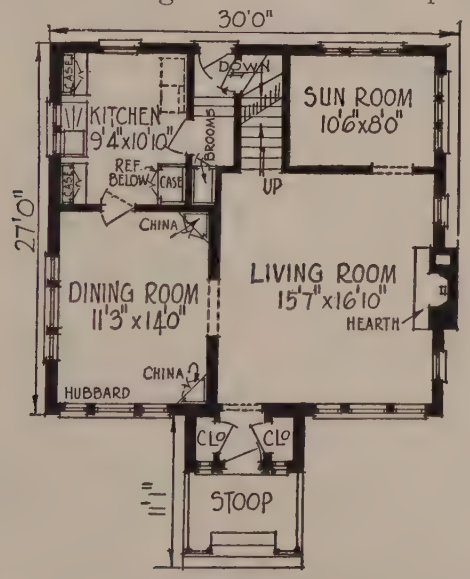
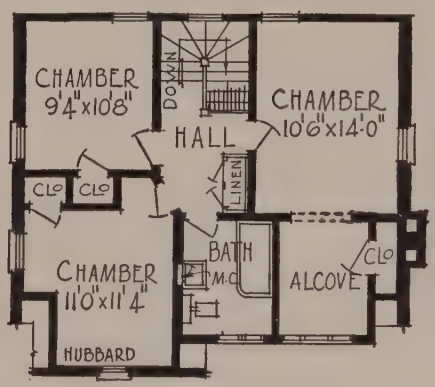
6 Rooms, Bath and Sun Room

The HUBBARD

THE effective exterior of this pleasing home is accomplished by combining face brick with shingled roof, iron railings and shutters. There is a splendid grouping of windows and an attractive dormer. A clothes closet on either side of vestibule, large living room with fireplace, built-in corner cabinets in dining room, built-in cabinets in the kitchen. A delightful sun room. Upstairs three chambers, model bathroom and closets.





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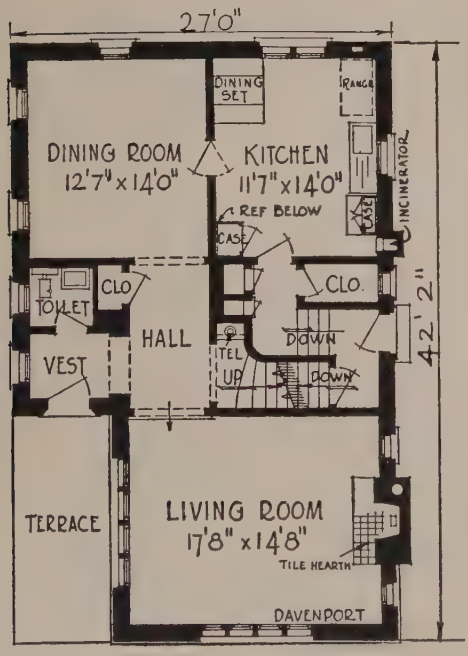
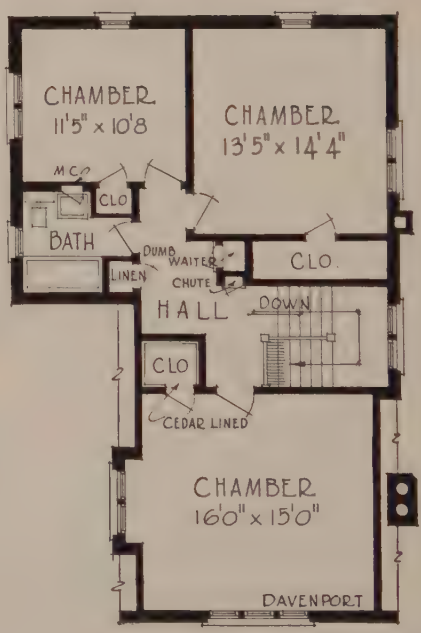
6 Rooms, Bath and Toilet

The DAVENPORT



AN ENGLISH home with the brick walls laid in the popular skintled fashion. The roof is a beautiful shade of blue-grey and the material is slate. An incinerator and dumb waiter are among the many modern conveniences indicated in the plan. Both floors are particularly well planned, and a large chamber occupies the front portion of the second floor.



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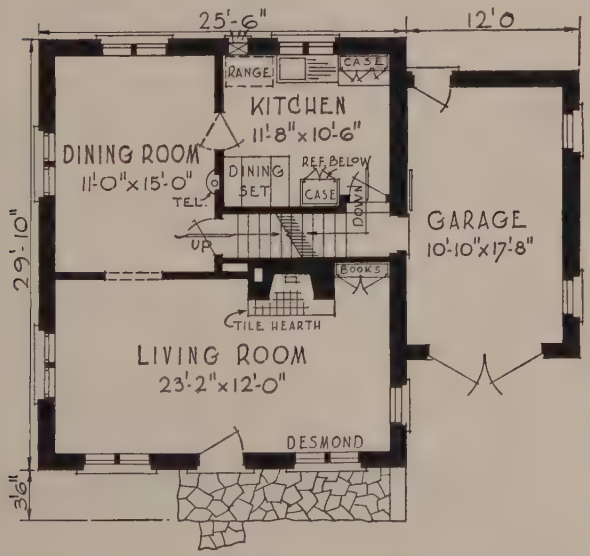
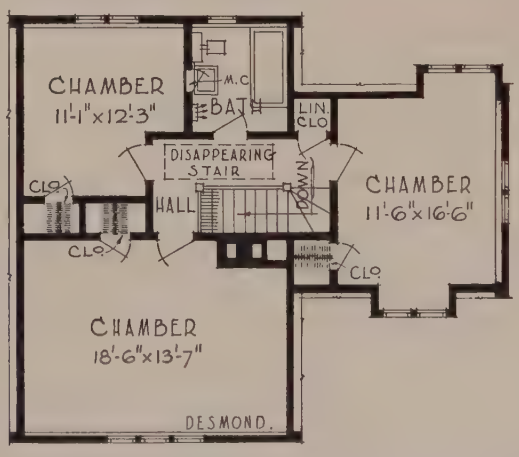
6 Rooms, Bath and Garage

The DESMOND

THE face brick is laid with unstruck mortar joints which gives an unusual, rustic effect. The stucco gable ends recall the pleasant manor houses of England. Careful arrangement of rooms, disappearing stairway to attic, and the many built-in features are shown on plans. Note the large size of rooms, and the built-in garage.





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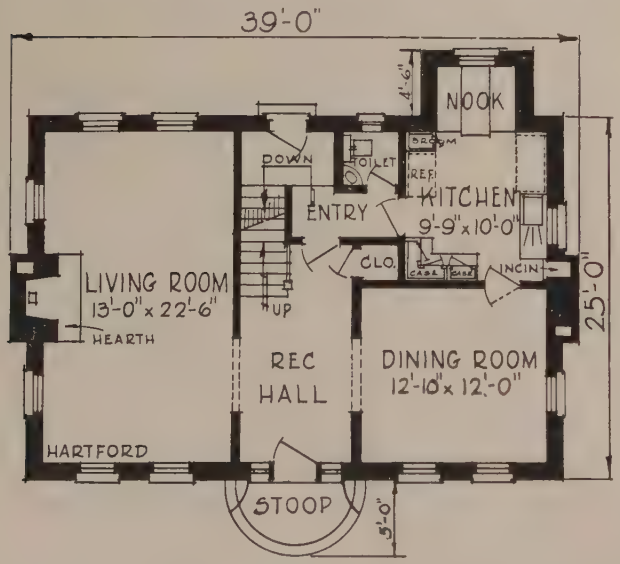
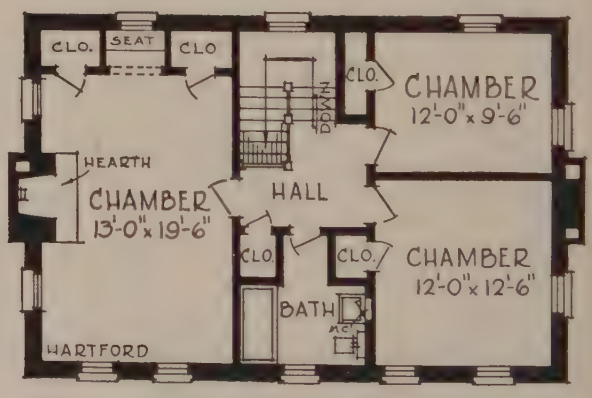
6 Rooms, Bath, Toilet and Nook

The HARTFORD

THIS SOLID, substantial, attractive home is built of common brick. Note numerous windows, those of second floor being shuttered. Brick stoop has metal hand rail. Living room is large, with fireplace. There is a toilet on first floor. Kitchen has large dining nook, broom and utility cabinets, and incinerator. On second floor is a large chamber with fireplace, large closets, window seat, a model bath and two smaller chambers.





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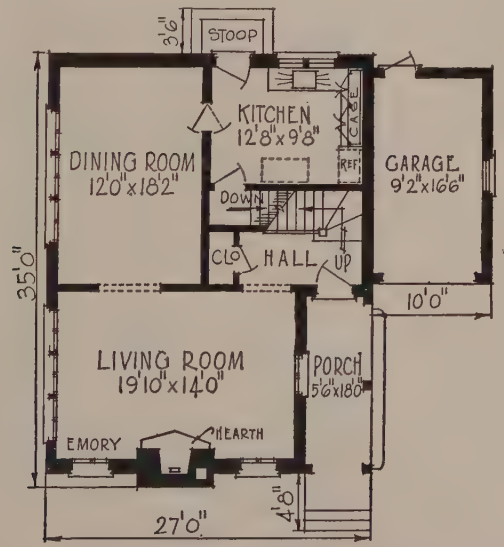
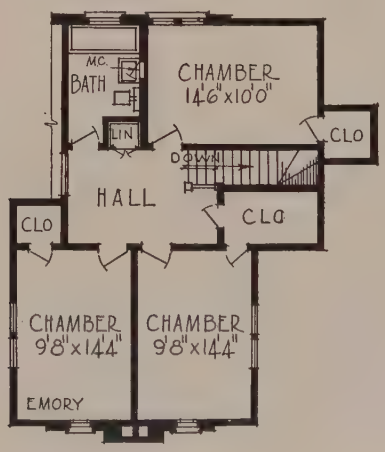
6 Rooms, Bath and Garage

The EMORY

COMMON BRICK is used for the walls of this attractive home with its built-on garage. Notice the open porch at the entrance, the large living room with fireplace, the efficiency kitchen and the closet on the first floor. There are three large chambers upstairs, a large hallway, linen closet and clothes closets. This home is exceptionally complete in every way and offers the utmost in comfort and convenience at a moderate cost.





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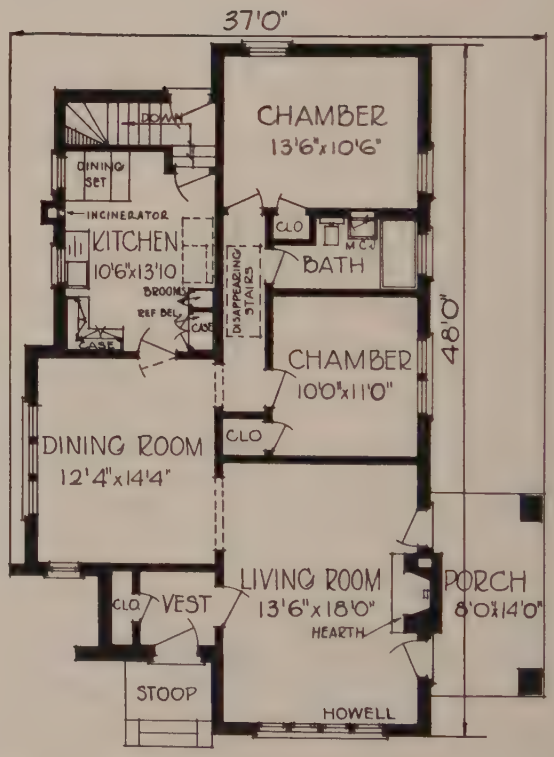
5 Rooms and Bath

The HOWELL

FACE BRICK with stone treatment at entrance and timbered stucco at gables forms this attractive exterior. There is a comfortable porch at right, off the living room. Living room has fireplace and there is a large closet in vestibule. Kitchen has broom closet, dining set, cabinets and built-in incinerator. There is an attractive bathroom and two bedrooms, each with closet. There is a disappearing stairway to attic.

Interior of living room showing fireplace



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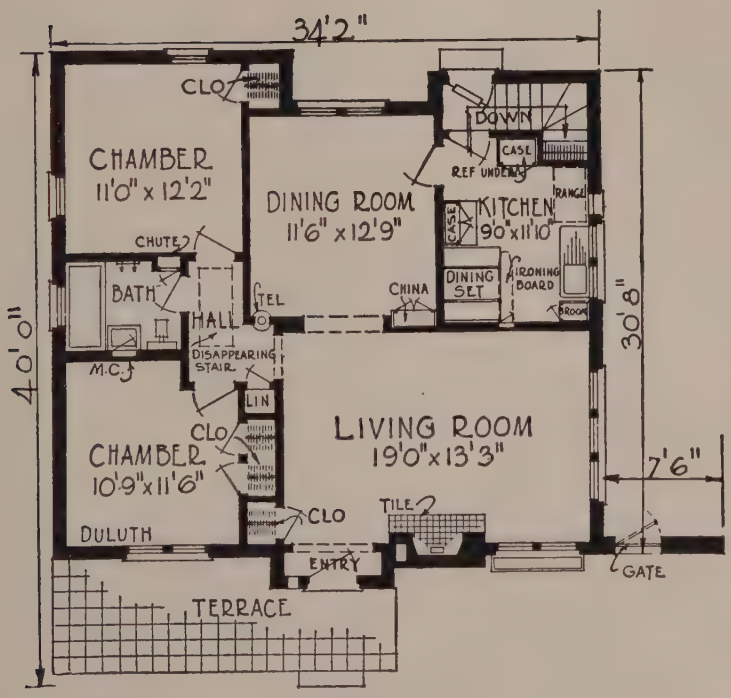
5 Rooms and Bath

The DULUTH



When searching for the perfect home, the Duluth deserves your careful consideration. Built of durable face brick, this house will not deteriorate with age. The colorful roof is of variegated asbestos shingles.

View of Living Room

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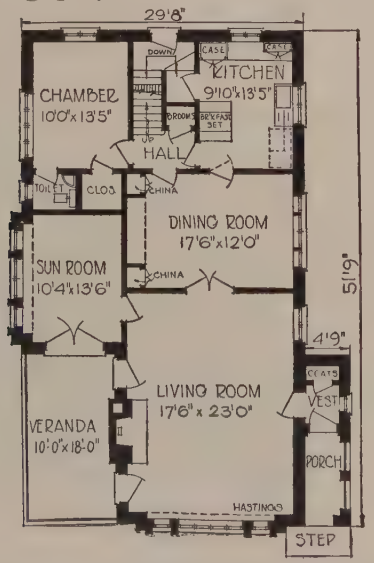
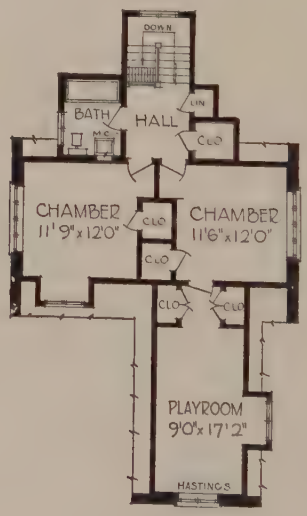
6 Rooms, Bath, Sun Room and Play Room

The HASTINGS

FACE BRICK and heavy slate for roof are effectively used for the exterior of this pleasing home. Notice railed veranda to left, and open porch at right leading into vestibule. Living room is large and adjoins a sun room. Dining room has corner cabinets, and kitchen has built-in conveniences. The large chamber on first floor has a convenient toilet. Upstairs is a big playroom and two comfortable chambers, bath, and ample closet space.





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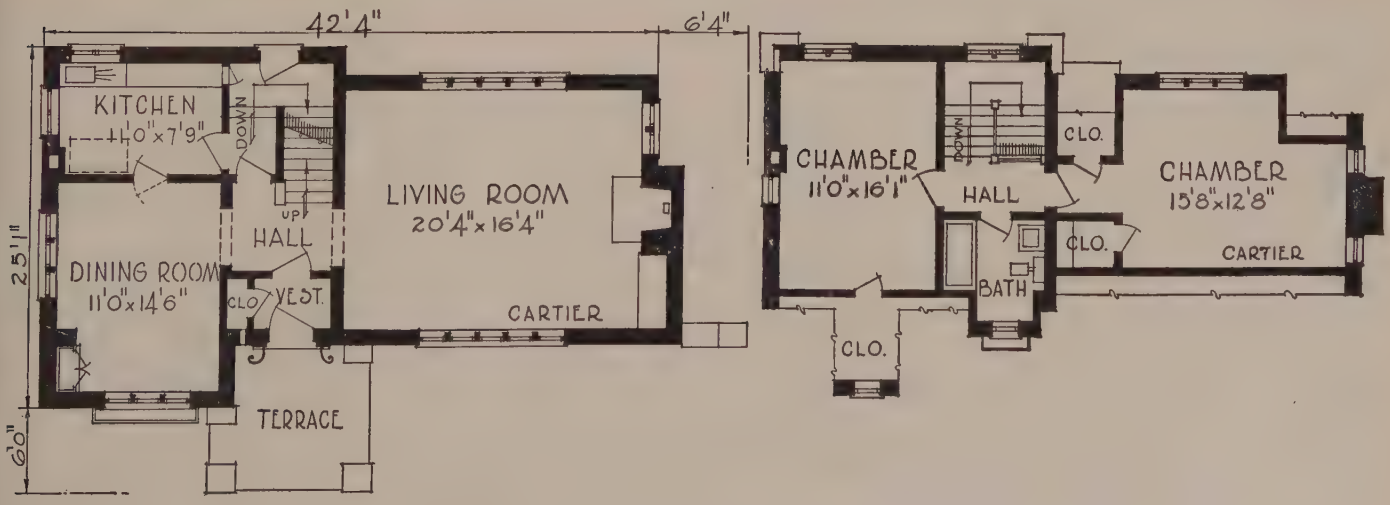
5 Rooms and Bath

The CARTIER

COMMON brick forms the outside walls of this attractive home. The pleasing lines of roof, the well grouped windows, and iron rails at terrace and at small window above the entrance add their touch to an unusually pleasing exterior. Interior is well planned.



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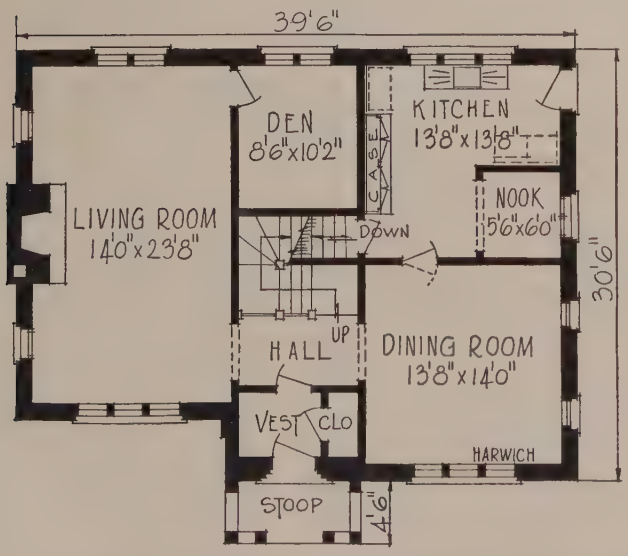
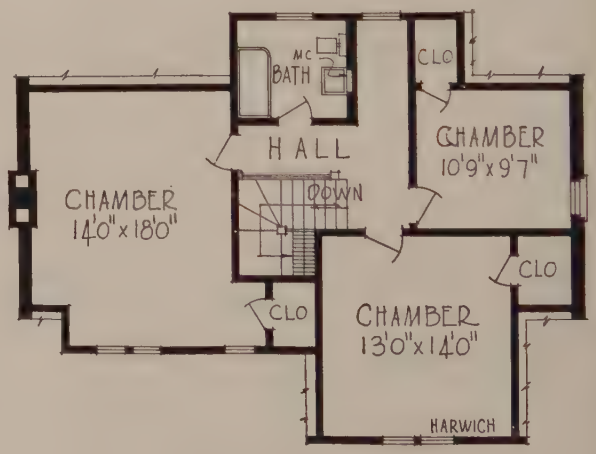
6 Rooms, Bath, Den and Dining Nook

The HARWICH

FACE BRICK walls and shingled roof with stucco and half-timbers at the gables and dormers make up this delightful exterior. The semi-enclosed entrance and two large window groups at each side present a pleasing front. Within, a fireplace cheers the living room and a light and airy kitchen is equipped with built-in cabinets and nook. A den opening from the living room will be acceptable to many discriminating builders.





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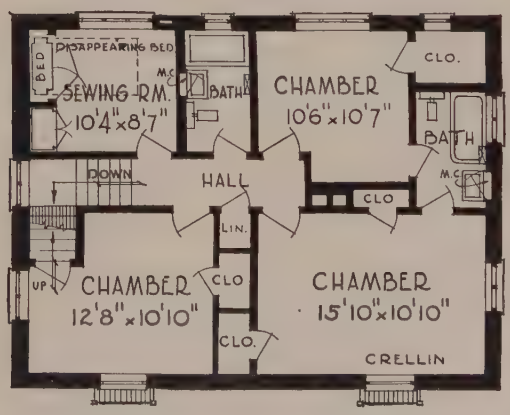
7 Rooms and 2 Baths

The CRELLIN

COMMON brick, colored white, is used for outside walls. This together with a slate shingle roof, random laid, makes an unusually effective combination. Steel sash are used throughout. The well arranged interior is supplied with all modern conveniences, including a disappearing bed in sewing room. There are three chambers and bath upstairs.



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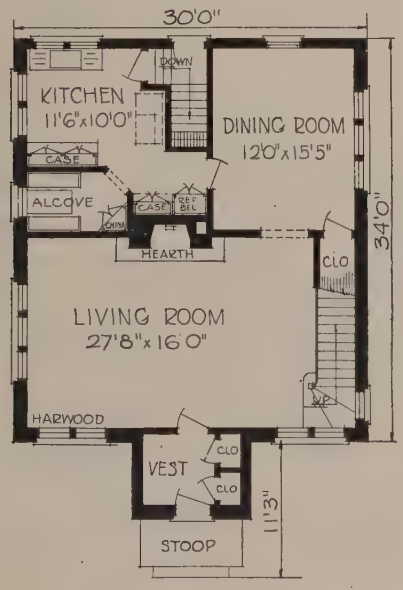
6 Rooms and Bath

The HARWOOD

FACE BRICK walls and slate roof combine to add charm to this well designed exterior. The entrance gable is very effective and the oriel window is pleasing. A fireplace adds cheer to a large living room. The kitchen is equipped with many built-in conveniences. The dining alcove has a handy built-in corner china case.



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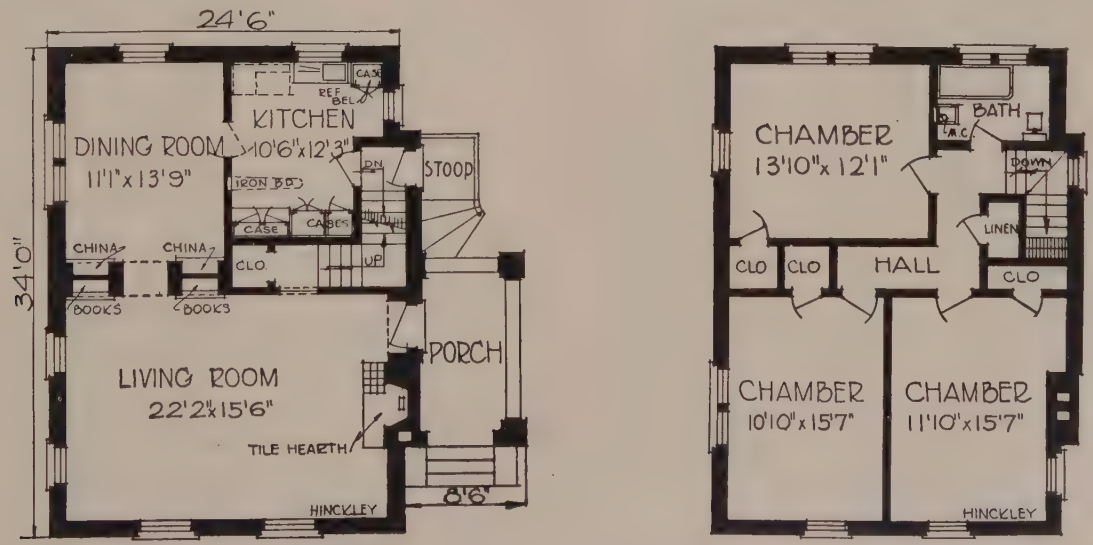
6 Rooms and Bath

The HINCKLEY

FACE BRICK is used for the walls of this attractive home. The roof is of asphalt shingles. There is an open porch, a large living room with fireplace and book shelves, a dining room with china shelves and a kitchen which has many desirable built-in features. Upstairs rooms are large and particularly well arranged with linen closet and numerous clothes closets, all easily available. There is also a model bathroom on this floor.



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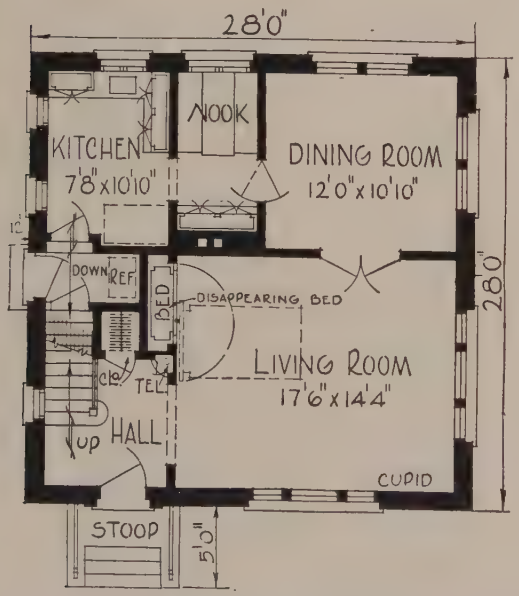
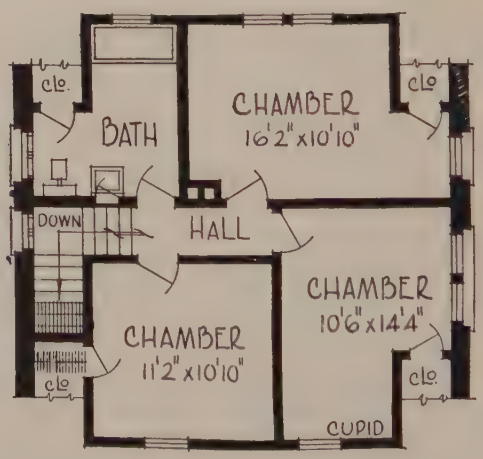
6 Rooms, Bath and Dining Nook

The CUPID

FACE brick, stucco and half timbers are pleasingly combined here. The roof is of varicolored asphalt shingles. The well arranged interior shows disappearing bed, dining nook, phone cabinet, kitchen cabinet, and space-saving clothes closet fixtures.





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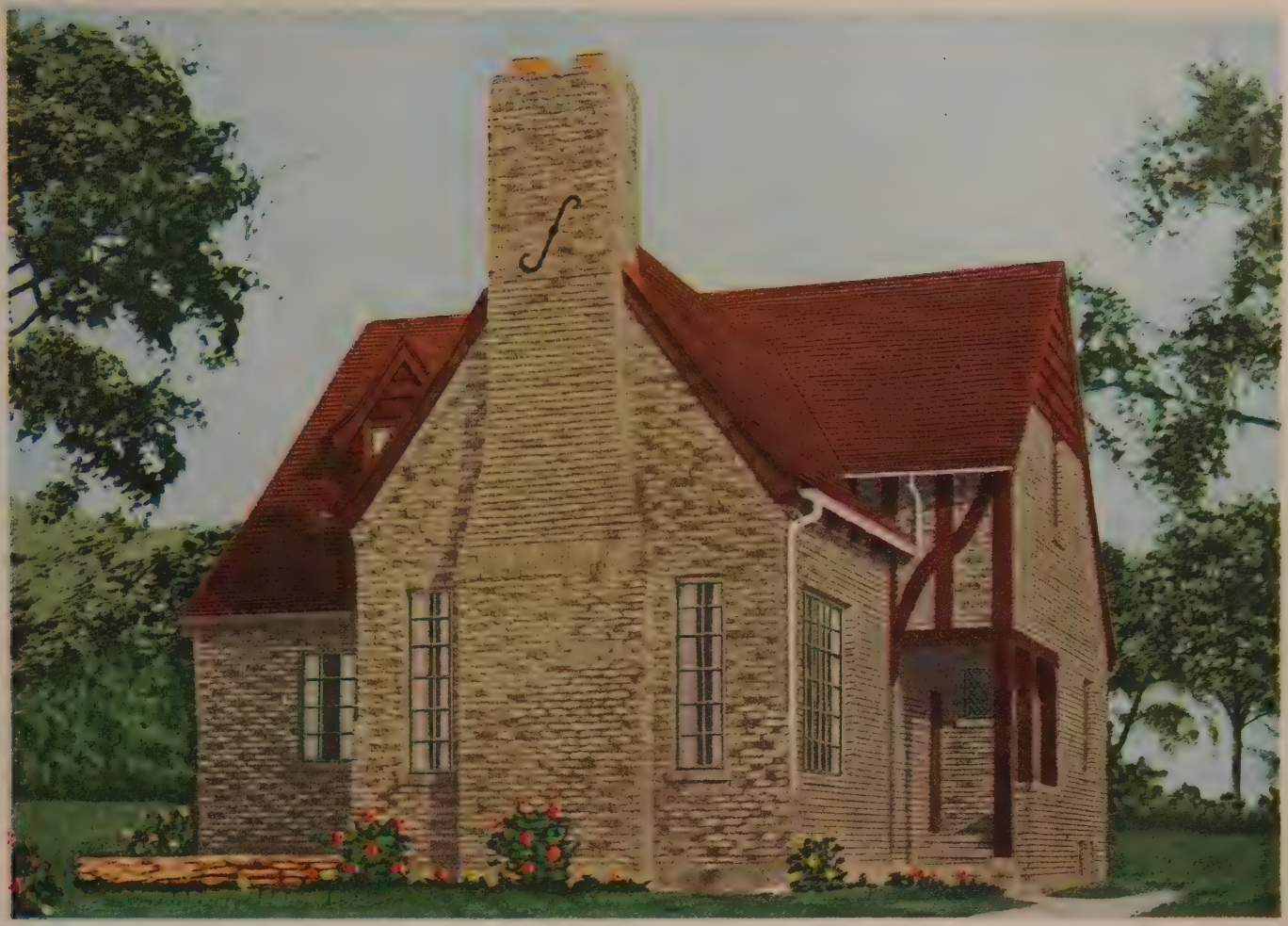
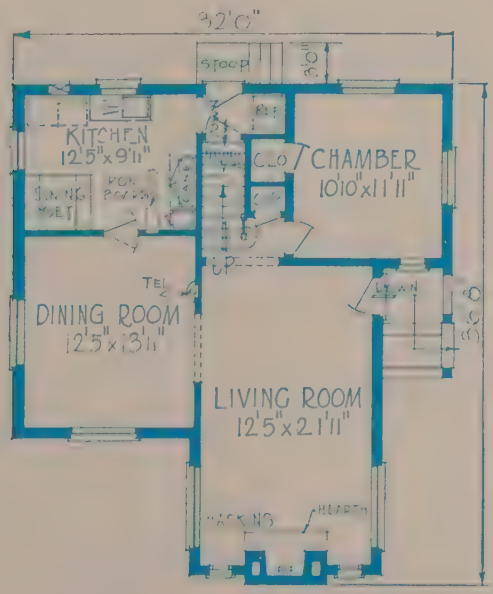
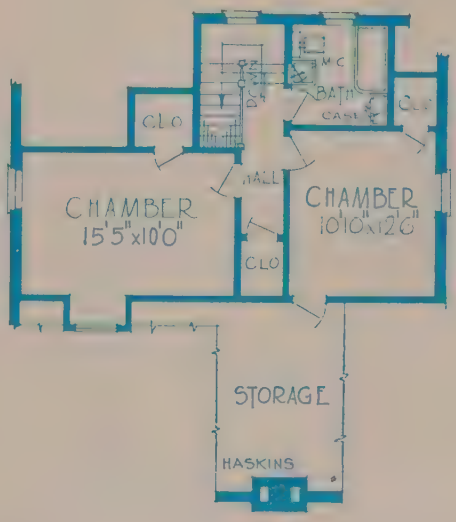


6 Rooms, Bath and Storage

The HASKINS

DIGNIFIED, simple, charming. This English type of home is suitably built of common brick with a shingled roof and sparingly decorated with a half-timbered entrance and siding at the gables. A massive chimney serves the fireplace at one end of the living room. Built-in phone cabinet, dining set, ironing board, kitchen and bathroom cabinets.





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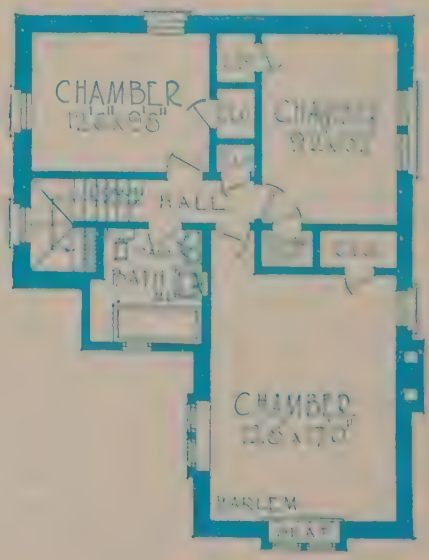
6 Rooms and Bath

The HARLEM

AN EFFECTIVE combination of brick, half-timber and stuccoed walls with a roof of vari-colored shingles. Good placement of windows make light cheerful rooms throughout. The living room has large fireplace and the kitchen is conveniently arranged with many built-in features. There is a cedar lined closet on second floor in addition to the room and hall closets. Note the convenient built-in case in bathroom.



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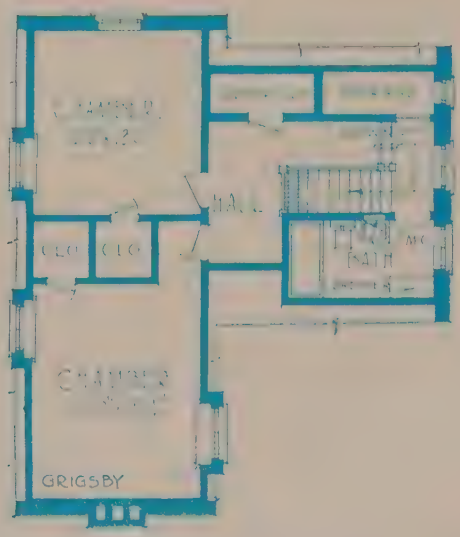
5 Rooms and Bath

The GRIGSBY

COMMON brick walls, slate roof, and unusual stone ornamentation at entrance and chimney top are responsible for the pleasing appearance of this home. The long living room has a fireplace with tile hearth at one end. The kitchen has built-in dining set, cases and ironing board. A large cedar closet, a storage closet, and a built-in bathroom dresser on second floor are features that will be appreciated because of their convenience.



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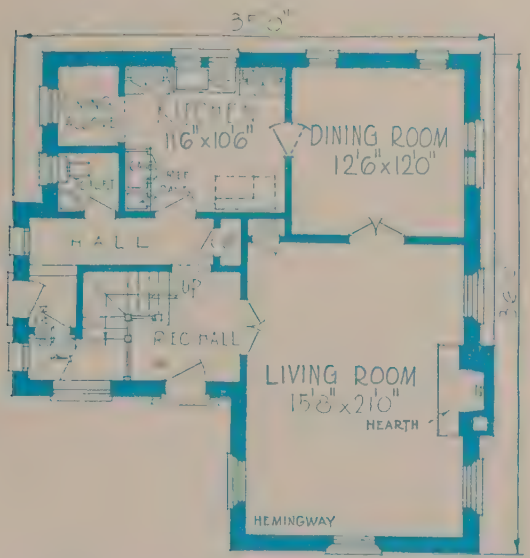
6 Rooms, Bath, Toilet and Dining Nook

The HEMMINGWAY

THE PLAIN lines of face brick walls of this home are broken up and vitalized by a good use of half timber decoration, leaded windows and cloistered entry way. The extra large living room has a natural fireplace. The kitchen is well arranged with a dining alcove. Disappearing stairs and cedar lined closet on second floor. Built-in features include kitchen units, also cases in the front bedroom. An added convenience is the extra downstairs toilet and lavatory that is conveniently located off the hallway.



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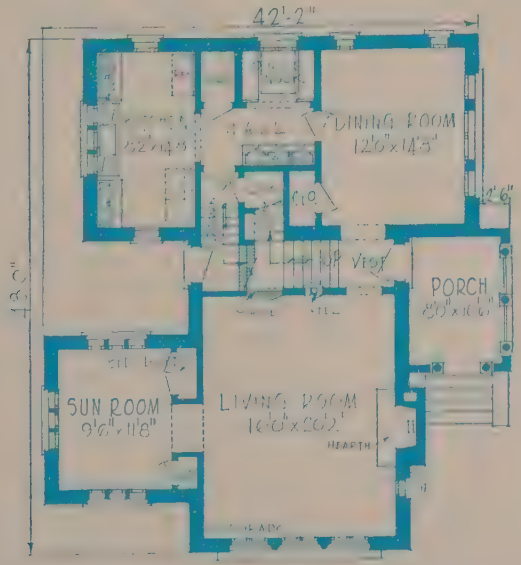
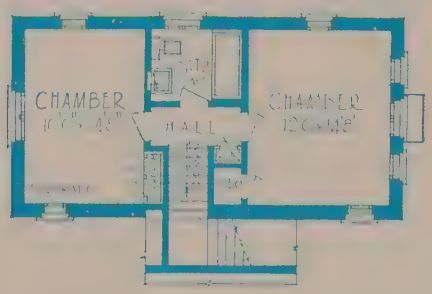
5 Rooms, Bath, Sun Room and Dining Nook

The ELDORADO

AN INTERESTING example of how face brick, tile, stone and ornamental iron is assembled by skilled architects to create a modern home in the Spanish motif. The living room has a natural fireplace. The sun room with its disappearing bed closet and clothes closet may be used for a sleeping room. The kithen includes built-in cabinets and additional shelves are opposite the dining nook. There is a built-in wardrobe in one bedroom.





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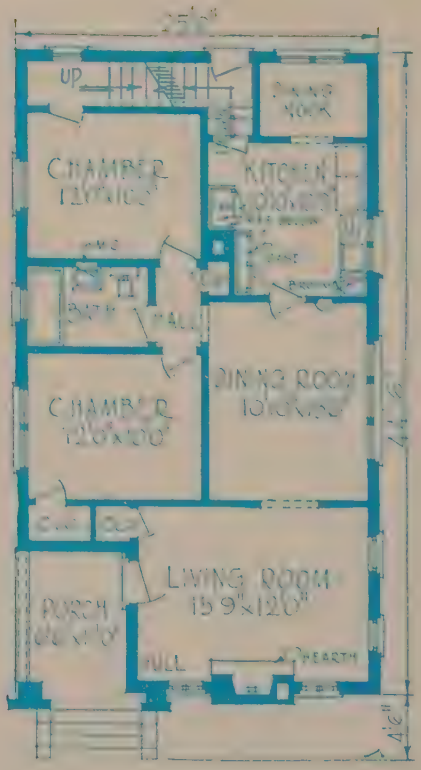
5 Rooms, Bath and Dining Nook

The HULL

THE exterior of this unusual bungalow utilizes variegated brick, stone, stucco and half timbered effect on upper portion, in charming combination. Note the imposing chimney and the well arranged interior with model kitchen and numerous built-in conveniences. The Dining Nook is useful and convenient.



A corner of the attractive living room.

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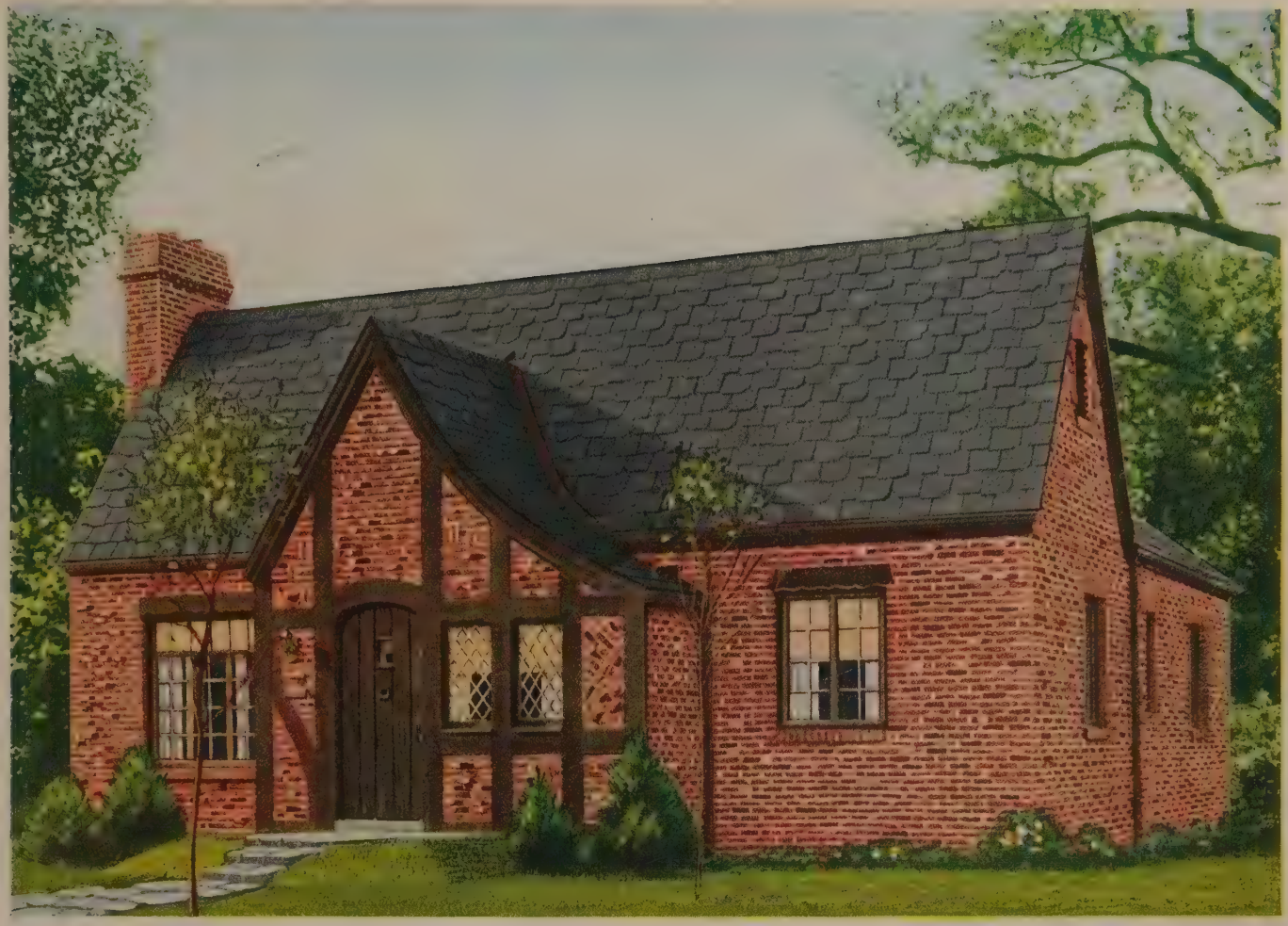
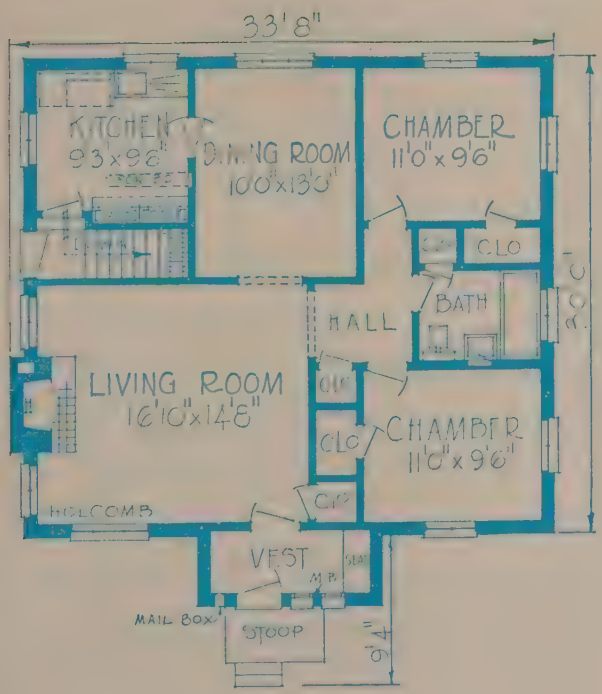


5 Rooms and Bath

The HOLCOMB



THIS bungalow presents a charming appearance with its walls of brick, and half timbered effect at entrance. Roof is slate and there is a splendid interior arrangement, including a model kitchen with various built-in equipment. Note the numerous closets and the built-in mail box at front entrance.

Suggested arrangement of furniture in the rear bedroom.

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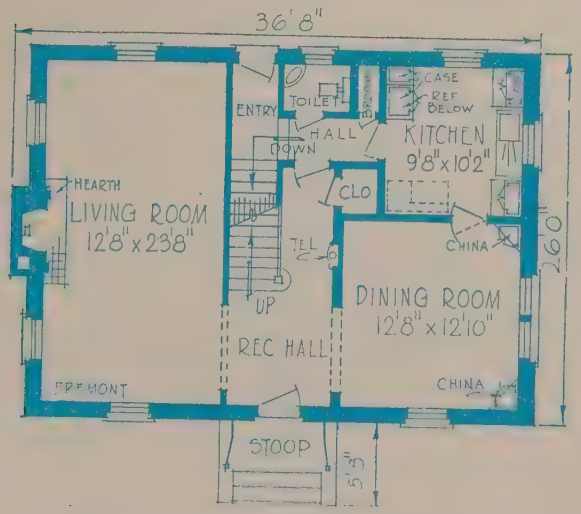
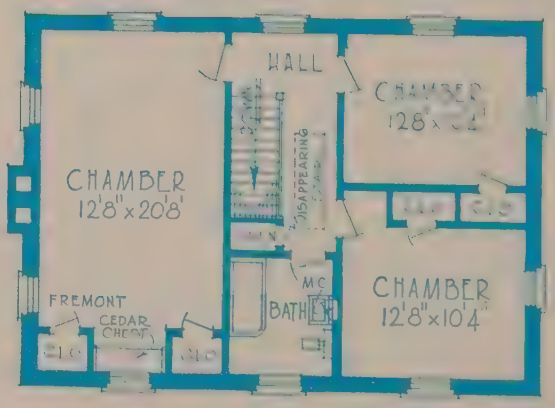
6 Rooms, Bath and Toilet

The FREMONT

A COMFORTABLE brick house with slate roof and highly decorative shuttered windows and colonial doorway. Both the large living room with natural fireplace and the bedroom above with built-in cedar chest and two closets have light from three sides. The dining room has built-in corner cabinets. The built-in kitchen conveniences enable work to be done with ease and dispatch. The extra toilet, telephone cabinet and disappearing stairway are other conveniences that will be greatly appreciated as they add much to comfort.





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5 Rooms and Bath

The HARTWICK

FACE BRICK has been combined to advantage with siding for the walls of this home. The roof is slate shingled. The large living room has a natural fireplace with a semi-circular hearth and opens into the dining room at the front and onto a good sized veranda at the back. Built-in conveniences include kitchen, ironing board and phone cabinets.

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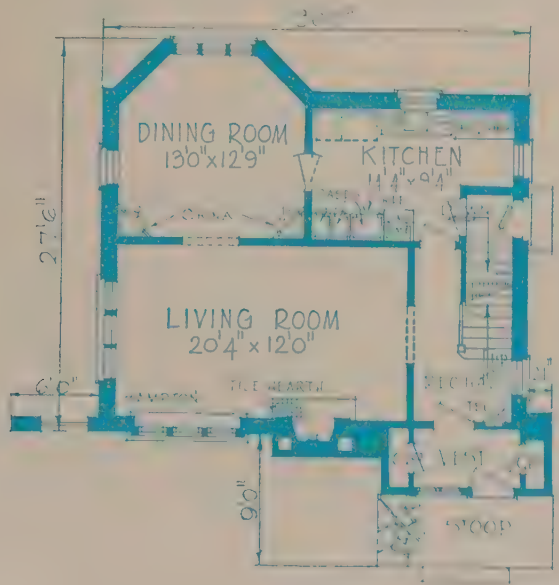
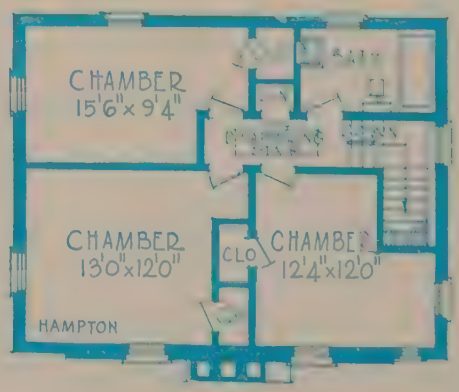
6 Rooms and Bath

The HAMPTON

AN ATTRACTIVE exterior, combining brick, siding, stucco and half timbers. The chimney is placed to show its good lines and, with the two gables, creates an interesting front wall. The living room has natural fireplace. China corner cabinets are built-in to dining room. Other built-in conveniences include kitchen units, disappearing stairs on second floor and reception hall telephone cabinet. Do not overlook the utility kitchen.





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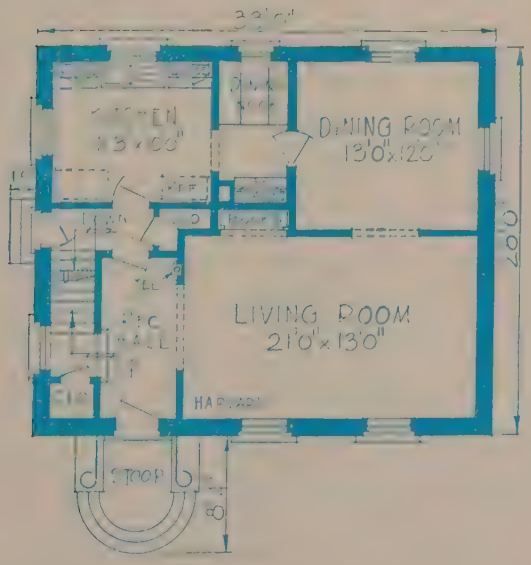
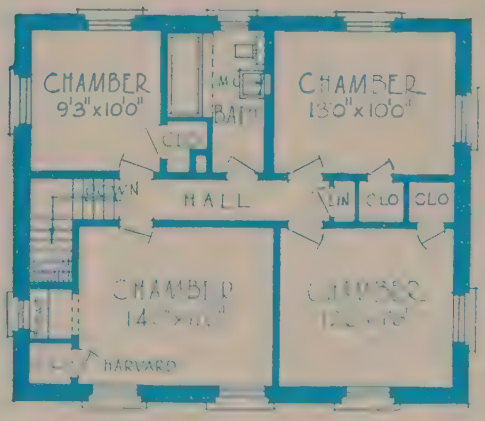
7 Rooms, Bath and Dining Nook

The HARVARD

FACE brick walls and tile roof, the former relieved by plenty of stone trim and arched door and windows. Green shutters and stoop rails repeat the roof color. Built-in conveniences include kitchen cases at either side of sink, pantry shelves, living room book shelves, hall telephone cabinet, and window seat in the bedroom.





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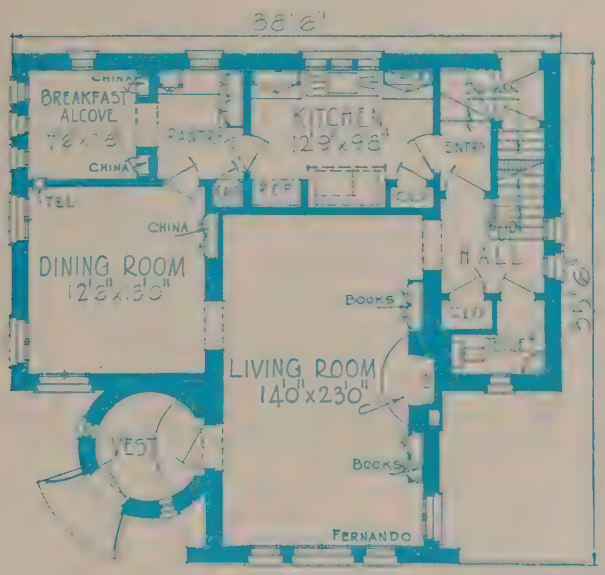
6 Rooms, Bath, Toilet and Dining Alcove

The FERNANDO

THIS characterful home is built of brick. The tile roof, conical tower, arched windows, and decorations of stone and ornamental iron are suggestive of sunny Spain. Built-in conveniences are unusually extensive including book shelves on each side of the living room fireplace, dining room and breakfast room china cabinets, pantry shelves, kitchen units and second floor hall window seat. The telephone cabinet is convenient.



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The ELARDEE

7 Rooms, Bath, Toilet and Alcove

A COMMODIOUS home in which the face brick walls and chimney have been effectively used with half timbered stucco gable and dormer, and shingled roof. A natural fireplace in the living room, built-in dining set, ironing board and kitchen units and other conveniences including telephone cabinet. A cedar closet is built into one bedroom and disappearing stairs lead to the attic. Do not overlook the convenient toilet arrangement on first floor.

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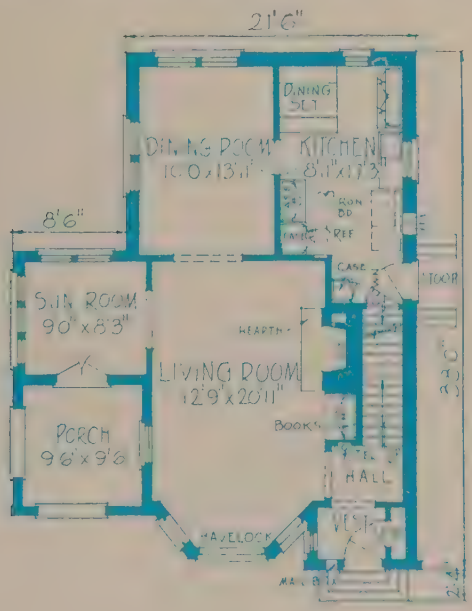
6 Rooms, Bath and Sun Room

The HAVELOCK

BRICK, stucco and half timbered walls, and an excellent color scheme. The living room with natural fireplace and built-in bookcase opens onto porch and sun room. Built-in dining set, ironing board, kitchen cases, telephone cabinet and mail box, and second floor cedar lined closets are desirable features. This home is appropriate for any neighborhood.



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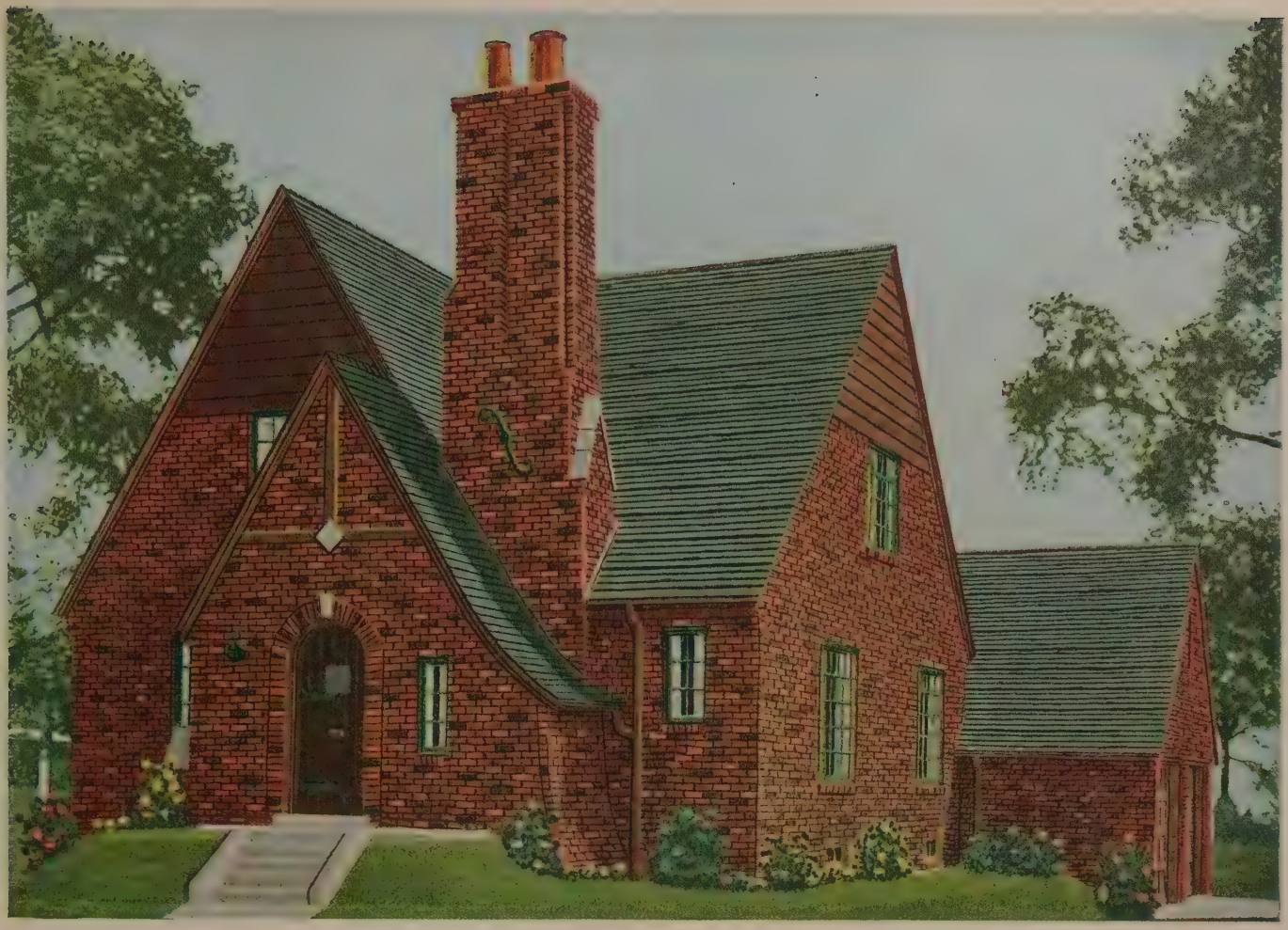
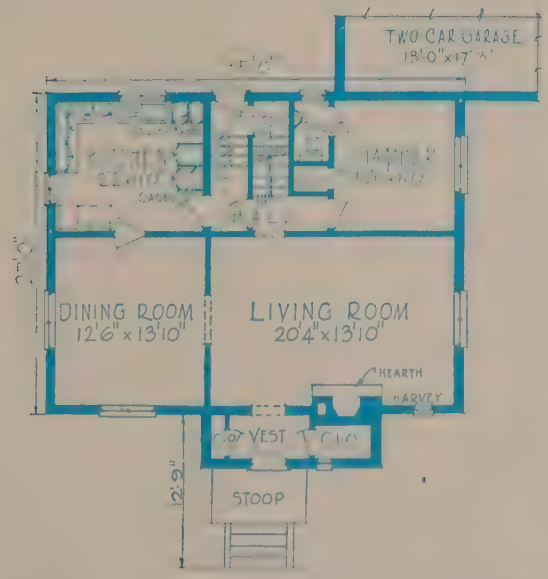


6 Rooms, Bath, Toilet and 2 Car Garage

The HARVEY

BRICK walls and chimney, shingled roof, graceful entrance gable and built-on two car garage. Exceptionally well arranged interior with a first floor bedroom for maid or overnight guest. Many built-in kitchen conveniences and a built-in bathroom cabinet. A large fireplace in the living room and extra closet space on the second floor are also provided for in the plans. This home is very suitable for either a corner or inside lot.



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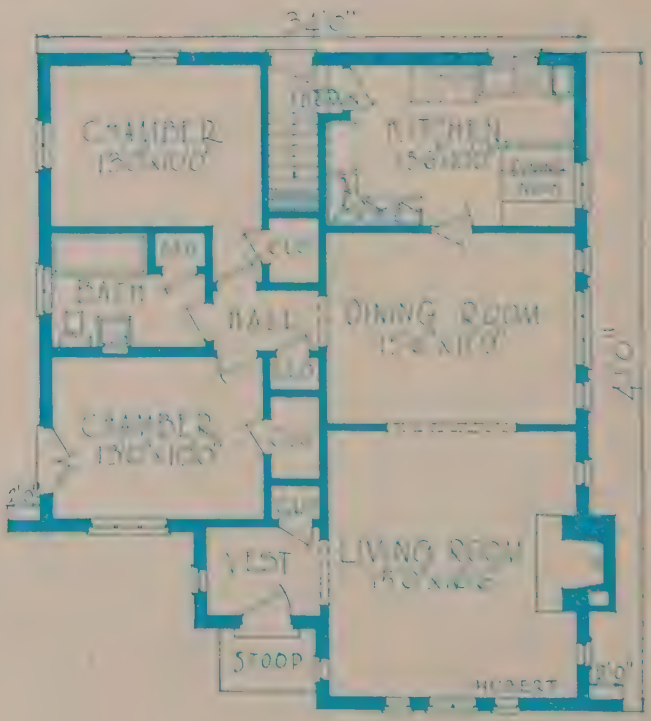
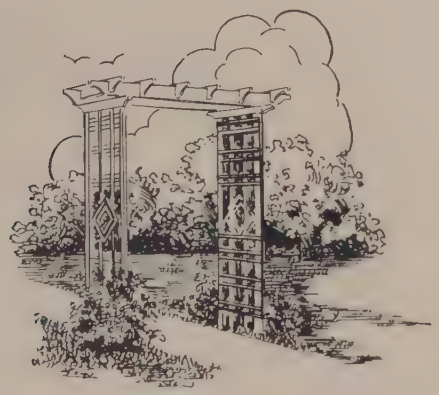
5 Rooms and Bath

The HUBERT

STRUCTURAL clay tile is used to advantage on the exterior walls of this home. The roof material is tile. The interior is well arranged with a cheerful fireplace in the living room, a dining nook and many built-in modern kitchen conveniences.





Landscaping always adds to beauty

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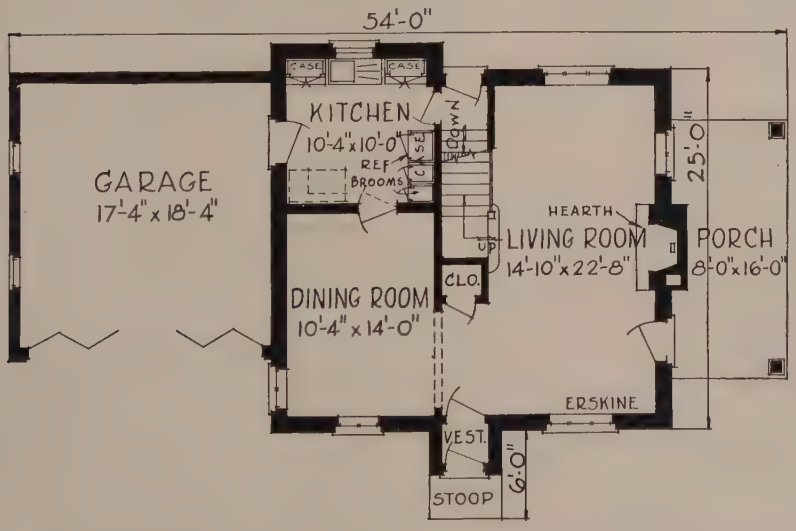
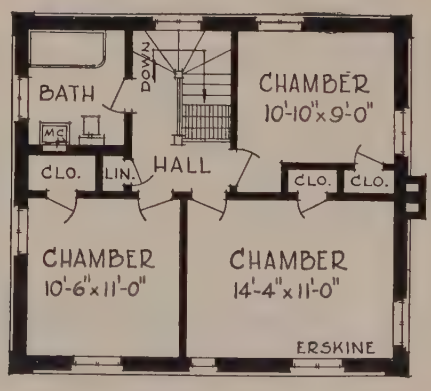
6 Rooms, Bath and 2-Car Garage

The ERSKINE

THIS HOME, with its two-car built-on garage, is face brick below and stucco on upper story in pleasing combination. There is a comfortable open porch entered from the living room which is large and extends the full depth of the house. The kitchen has built-in utility and broom cabinets. Upstairs there are three large chambers, a model bathroom, a linen, and clothes closets. Note the well grouped windows that insure splendid light and ventilation. The broad expansive roof is covered with tile.





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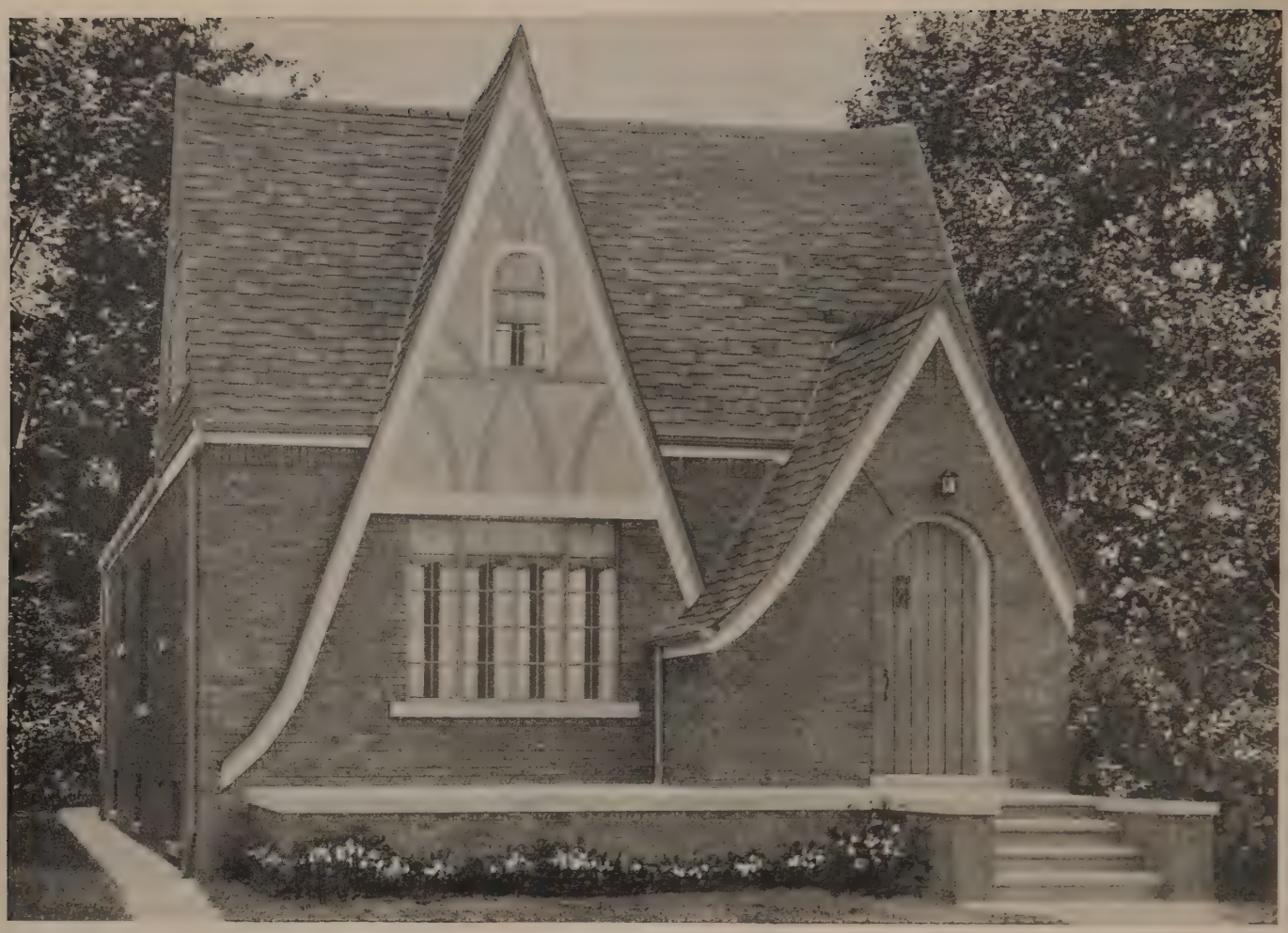
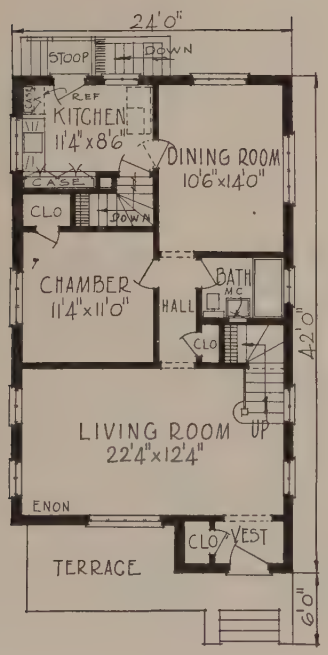
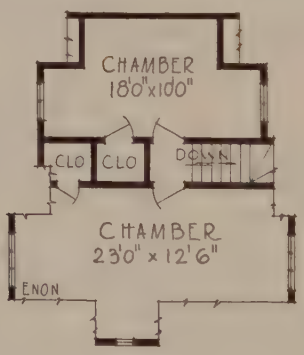


6 Rooms and Bath

The ENON

THE STRIKING gable at the left and the well designed entrance gable present an unusually good looking front. The walls of this home are of face brick except for half-timbered stucco at the front gable and shingled gables at the sides. The well planned interior includes a model kitchen equipped with built-in cabinets. Second floor has two chambers.





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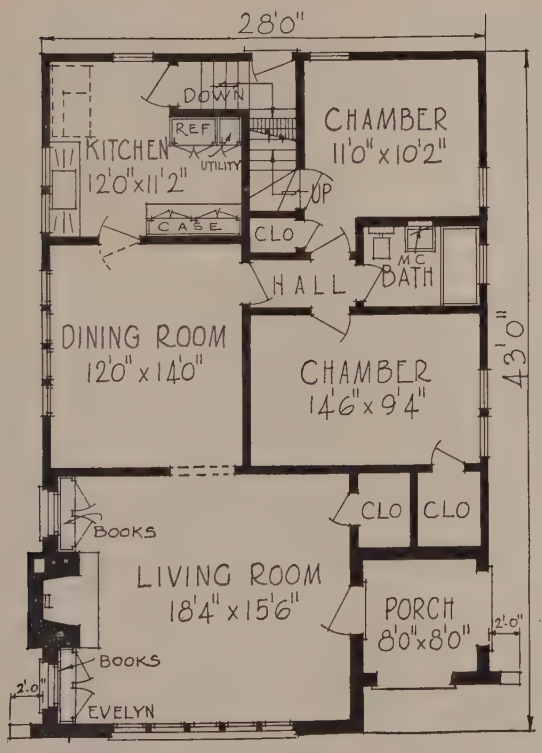
5 Rooms and Bath



The EVELYN

FACE BRICK, in combination with half timbered stucco, forms this attractive exterior. The cluster window arrangement in the living room is effective. Note the porch, the large living room with fireplace flanked with book cabinets. The kitchen has built-in cabinets. There is a model bathroom and two large chambers, and ample closets. Careful study has been given to every detail to bring the utmost in comfort and convenience.

End of living room showing fireplace and book cabinets

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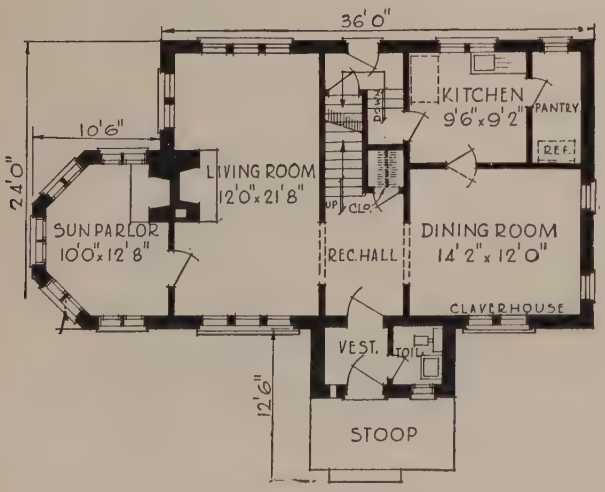
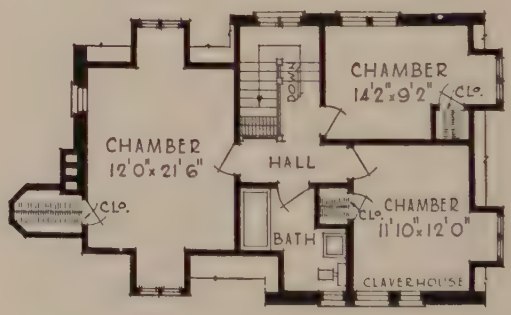
6 Rooms, Bath, Toilet and Sun Parlor

The CLAVERHOUSE

INTERESTING roof lines help give this home of face brick construction an air of distinction. Windows are well arranged and there is a charming entrance. Inside, the floor plans deserve careful consideration, for there are many attractive features perhaps not noticeable at first glance. There is a large living room and a sun parlor with bay windows.





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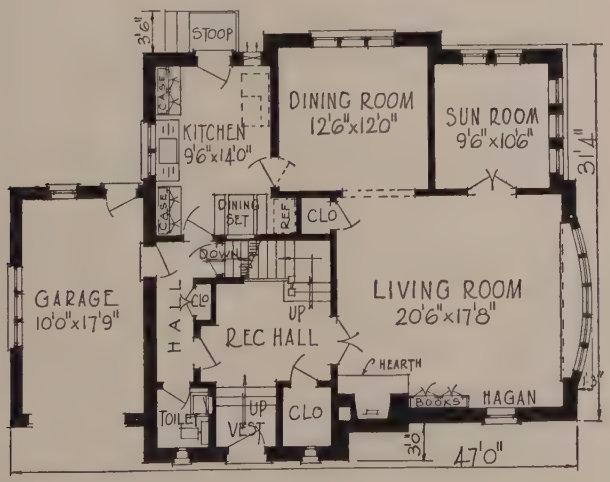
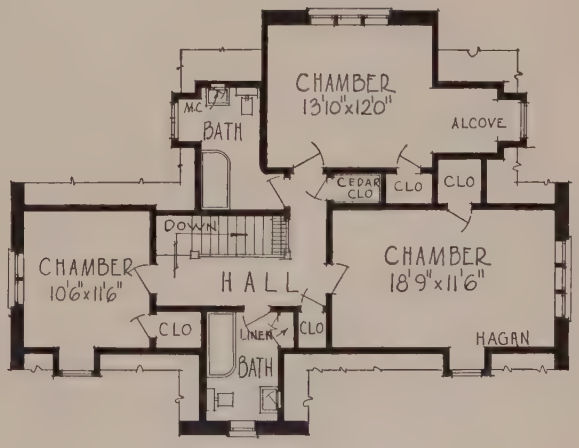
6 Rooms, 2 Baths, Toilet, Sun Room, Alcove and Garage

The HAGAN

THE outside walls of this pleasing home are face brick laid at random. The garage is built on and connects with the hall. The interior is well planned and all rooms are especially light and cheerful. The second floor has three large well appointed chambers with plenty of closets and two fully equipped bathrooms. Note the cedar lined closet.





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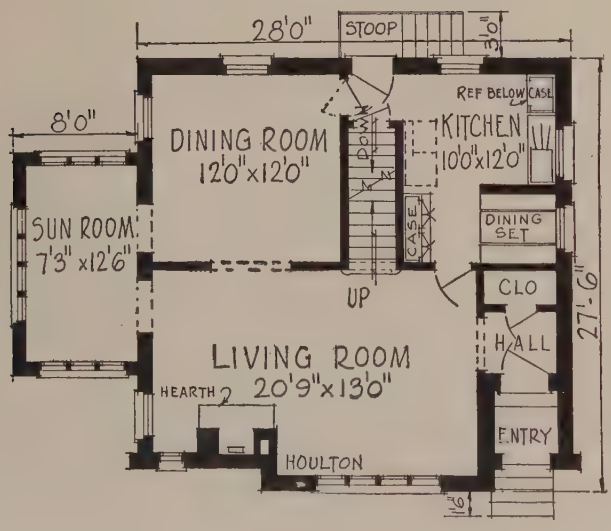
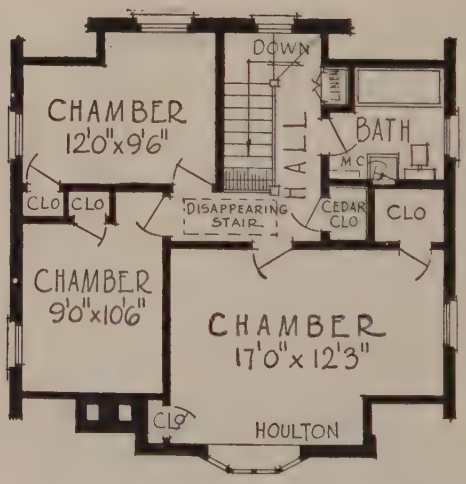
6 Rooms, Bath, Sun Room and Dining Nook

The HOULTON

A HOME of distinctive design utilizing face brick ornamented with stone for the walls and tile for the roof. The living room has a fireplace and opens at one side direct into the kitchen with its built-in dining set and other conveniences. On the second floor are three chambers, a very convenient disappearing stairway and a cedar lined closet.





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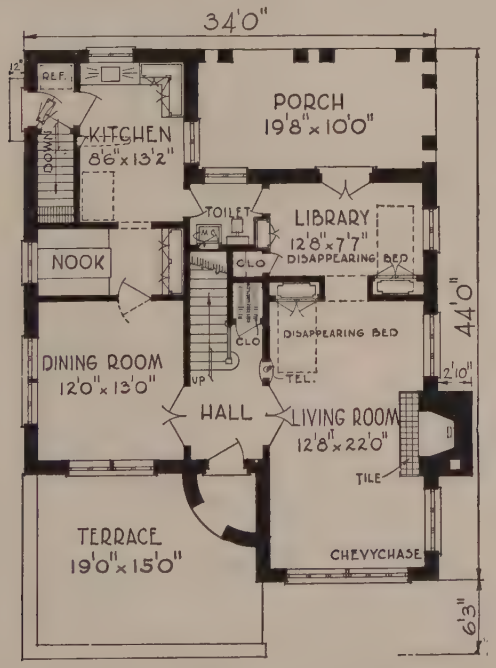
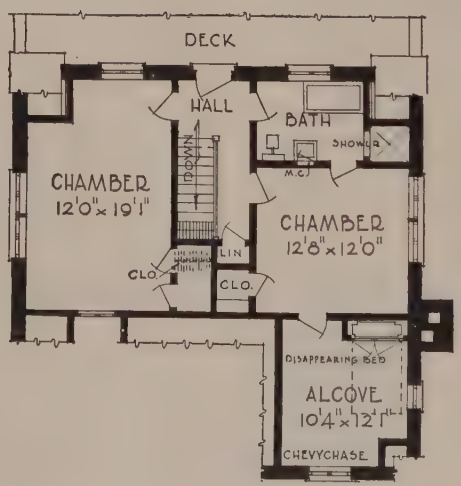
6 Rooms, Bath, Alcove and Dining Nook

The CHEVYCHASE

COMMON brick, laid in true rustic fashion, forms the outer walls of this charming old English home. Steel sash are used throughout. The well arranged interior provides for all the modern built-in features, including three convenient disappearing beds.





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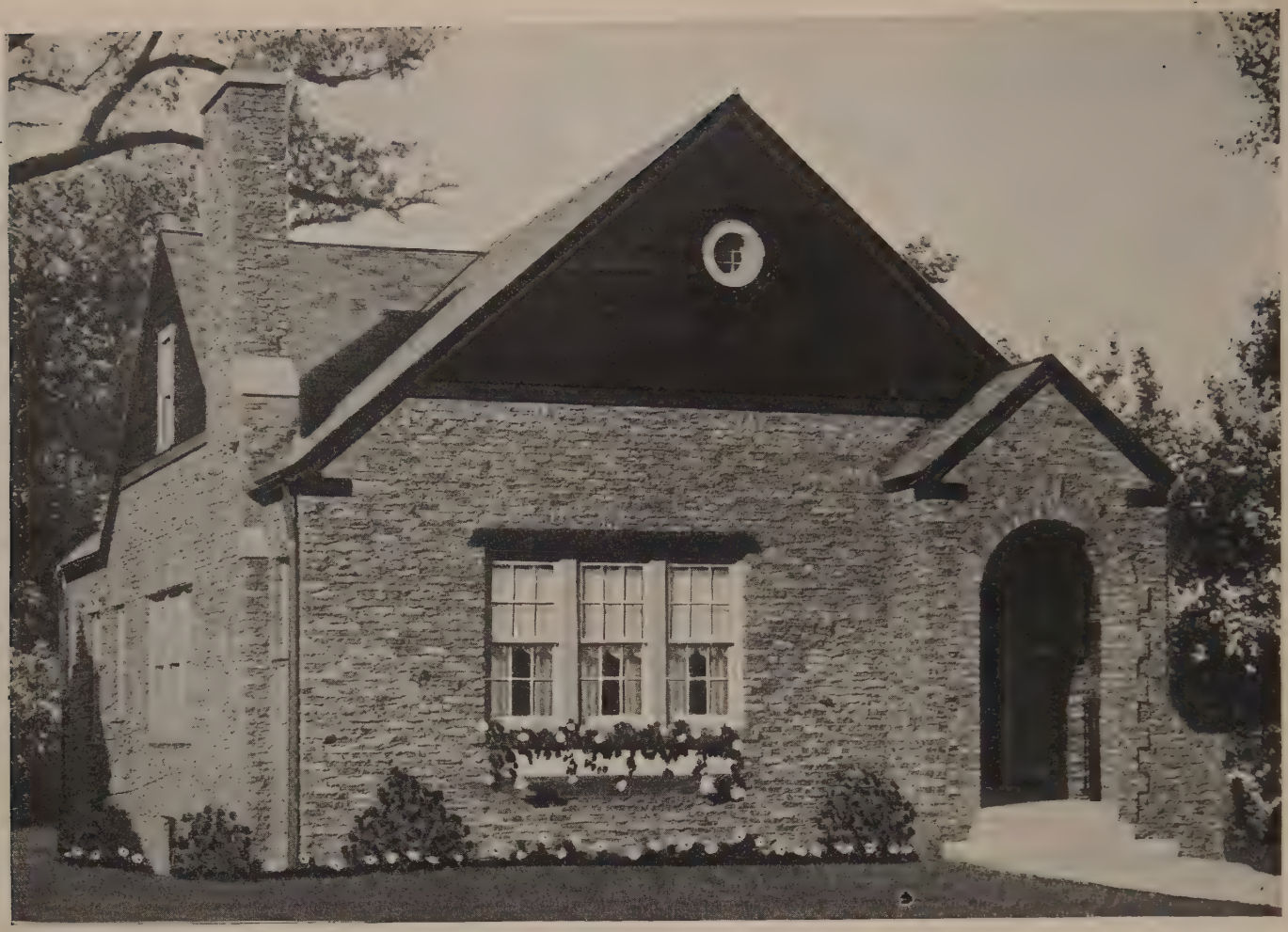
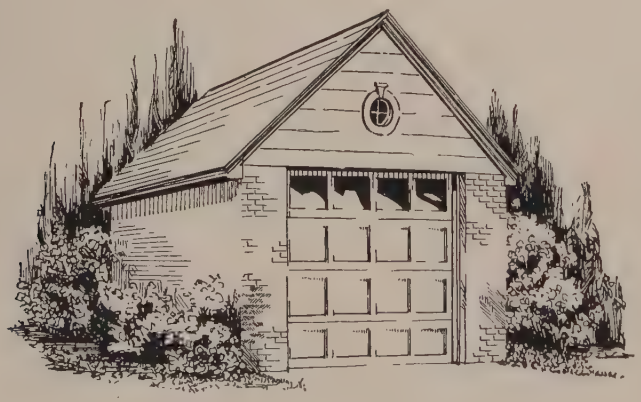


5 Rooms and Bath

The HAWLEY

COMMON BRICK, with siding in contrasting color at upper part of gable, forms this unusual and attractive exterior. Notice the splendid grouping of living room windows, the ornamental window of attic, the large living room with built-in fireplace and phone cabinet, the efficiency kitchen with ironing board and utility cabinets, the model bath and the two comfortable chambers. A vestibule with a closet at one end leads into living room, and there are closets in each bedroom hall.



Here is a garage that harmonizes with the home above

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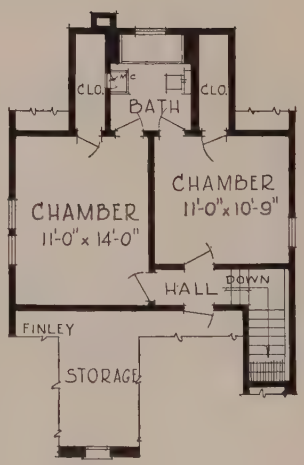
6 Rooms, 2 Baths and Storage

The FINLEY

THIS INTERESTING home combines face brick and shingles for its walls and utilizes tile for its roof. The striking roof lines are emphasized by white at the eaves. The stone veranda has an ornamental iron railing harmonizing with the decorated glass at windows and entrance. Built-in conveniences include telephone cabinet in the dining room, kitchen cabinets and ironing board. This home is planned to give well lighted rooms throughout.



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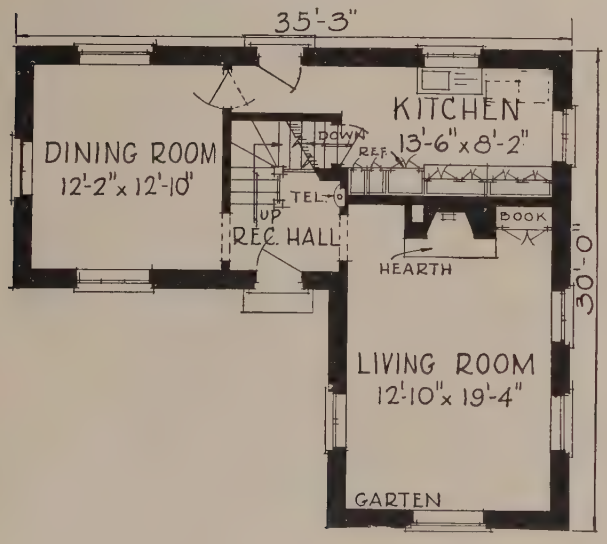
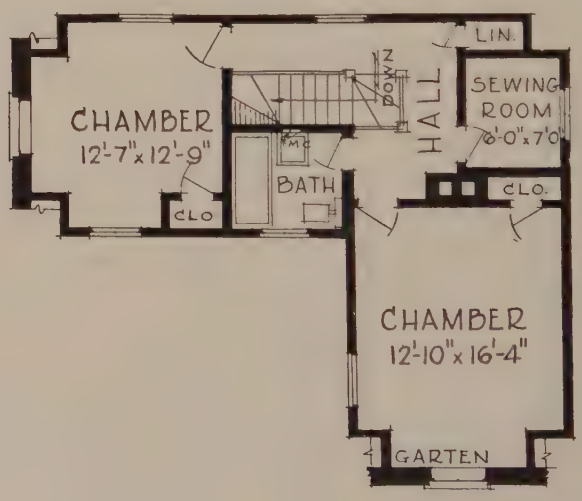
5 Rooms, Bath and Sewing Room

The GARTEN

FACE BRICK for walls, shingles for roof and dormer are effectively used on this charming home. The large living room has a fireplace and built-in book case. A telephone cabinet is built into the reception hall. The light cheerful kitchen is completely equipped with built-in conveniences. A handy sewing room is located on the second floor.





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7 Rooms, 2 Baths, and Alcove

The DOWNING

THIS unusual home of colorful face brick, with its roof of blue-gray slate, will appear to best advantage on a corner lot. Under no circumstances should it be crowded into narrow space. Much could be said of the well-planned interior and many convenience features. Note the size of the living room with its bay window, the alcove with cedar-lined closet.

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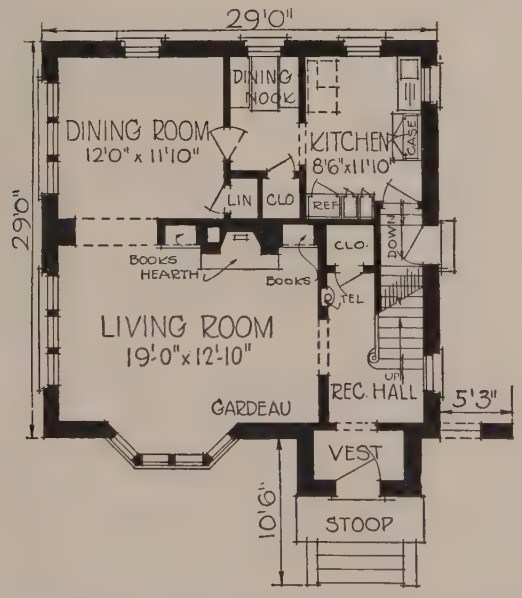
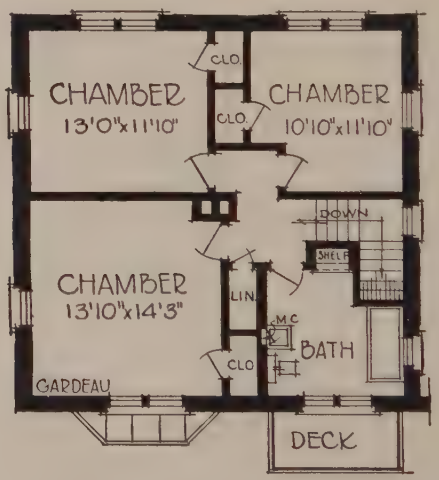
6 Rooms, Bath and Dining Nook

The GARDEAU

THIS pleasing exterior is built of face brick and the roof is of asphalt shingles. Notice the entrance with archway at side walk. Large living room with fireplace and built-in book shelves, dining room with linen closet, and dining nook. Upstairs are three chambers, linen and clothes closets, a railed deck and a model bathroom.





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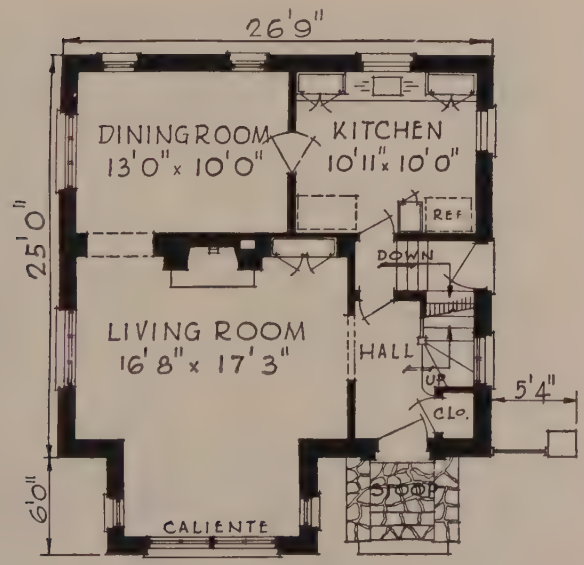
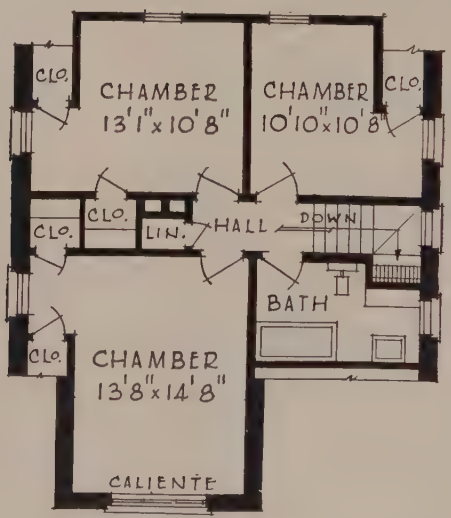
6 Rooms and Bath

The CALIENTE

THIS home, unusually attractive, exemplifies the pleasing use of common brick, laid in rustic manner, and relieved by stone. Practical, easy-working steel sash are used for casements. Rooms are particularly well arranged for comfort and convenience.





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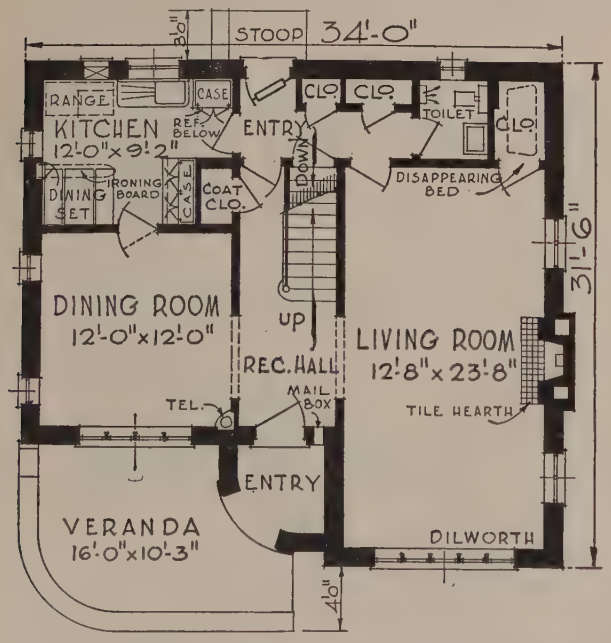
6 Rooms, 2 Baths and Toilet

The DILWORTH

THE exterior of this artistic home is constructed of common brick laid in rustic skintled fashion. Roof is of asphalt shingles. Both floors are exceptionally well planned and many built-in features are included such as dining set and disappearing bed.



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6 Rooms, Bath and Nook

The GREGGS

THIS HOME, which utilizes face brick for the exterior has an unusually substantial and sturdy look in addition to its architectural merit. The living room is large, with a convenient fireplace and kitchen has built-in conveniences including incinerator. Note the breakfast nook. Upstairs are three chambers and alcove. There is a model bathroom.

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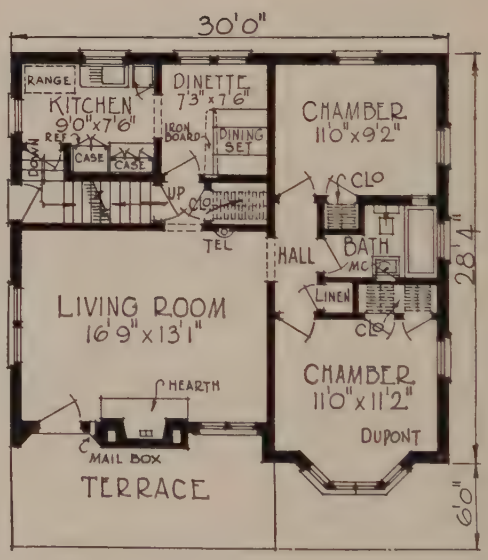
5 Rooms and Bath

The DUPONT

A BUNGALOW that is very different. The walls are of face brick, the roof of variegated asphalt shingles. The front entrance is both artistic and appropriate. There is a striking chimney, a wonderful room arrangement and built-in convenience features without number.



Interior of Living Room

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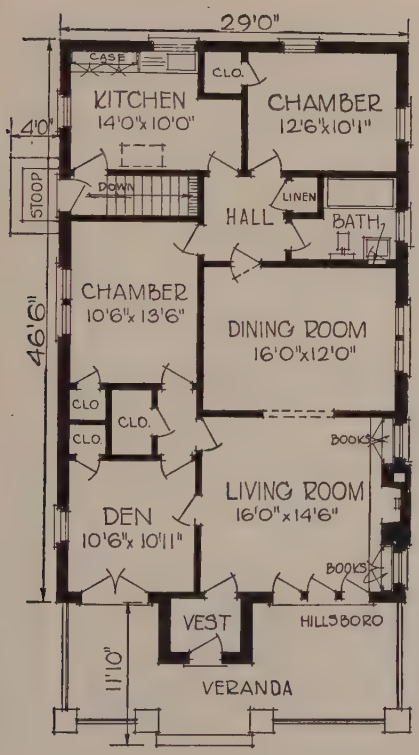
6 Rooms and Bath

The HILLSBORO



THIS attractive bungalow home, with its railed veranda, is built of face brick with roof of thatched shingles. Notice the unique dormers that break the broad expanse of roof, the inviting entrance, the well placed French casements. Living room has fireplace and built-in book cabinets. A cozy den adjoins the living room. Kitchen has built-in cabinets. There is a model bathroom, and two large chambers. There is a linen closet and other large conveniently located closets.

Fireplaces are cheerful and comfortable

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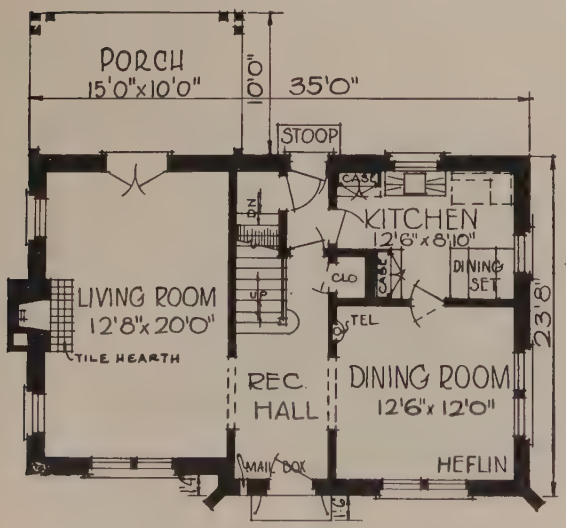
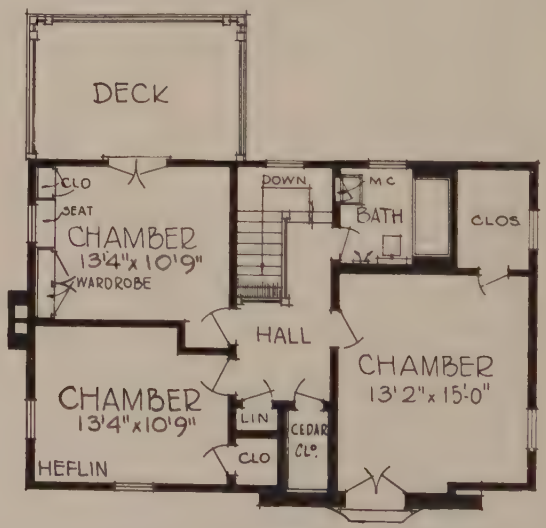
6 Rooms and Bath

The HEFLIN

FACE BRICK for the first floor and shingles for the second floor are harmoniously combined. There is large rear porch, an inviting entrance and a small balcony at the second floor. There is reception hall with built-in mail box. Living room is large with tile hearth and model kitchen has a built-in dining set and utility cabinets. In dining room is built-in phone cabinet. Upstairs are three large chambers, one having a built-in wardrobe and window seat; a cedar closet, linen closet, clothes closets, a model bathroom.





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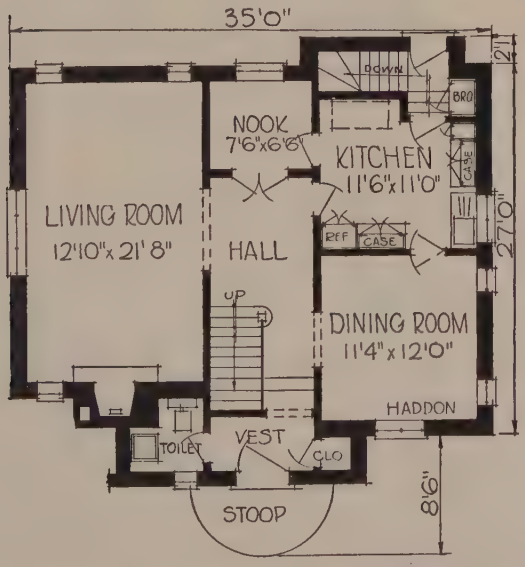
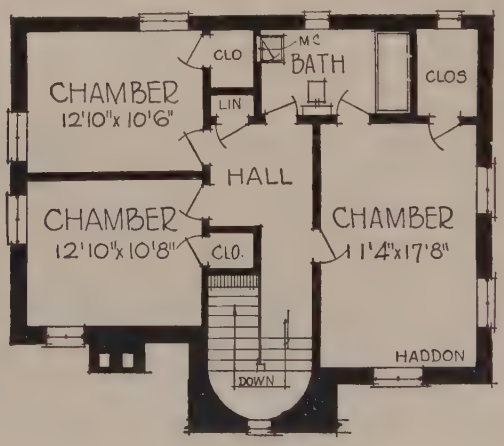
6 Rooms, Bath, Toilet and Dining Nook

The HADDON

THE attractiveness of this home is effected by the use of face brick, stucco, and half-timbers. There is an inviting entrance and an imposing, well designed chimney. Notice circular stoop, vestibule with clothes closet and toilet, and dining nook. The large living room has a massive fireplace, and the efficiency kitchen has numerous built-in features. There are three chambers, bathroom, linen and other closets on the second floor.





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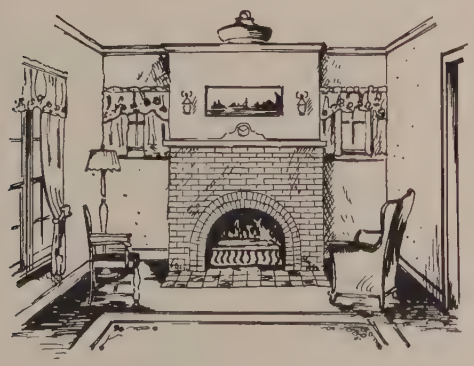
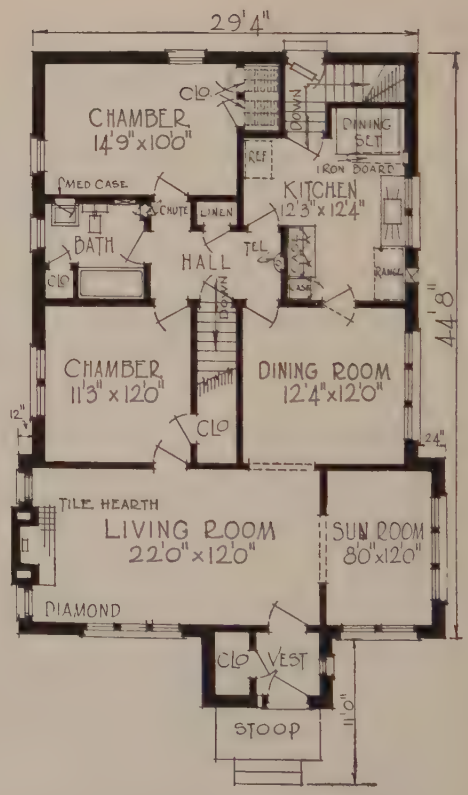
5 Rooms, Bath and Sun Room

The DIAMOND

A ROOF of asbestos is the colorful crown of this appealing bungalow of face brick construction. The floor plan is excellent and many built-in conveniences are included. Note the attractive entrance, the large living room and sun room.



Fireplace In Living Room



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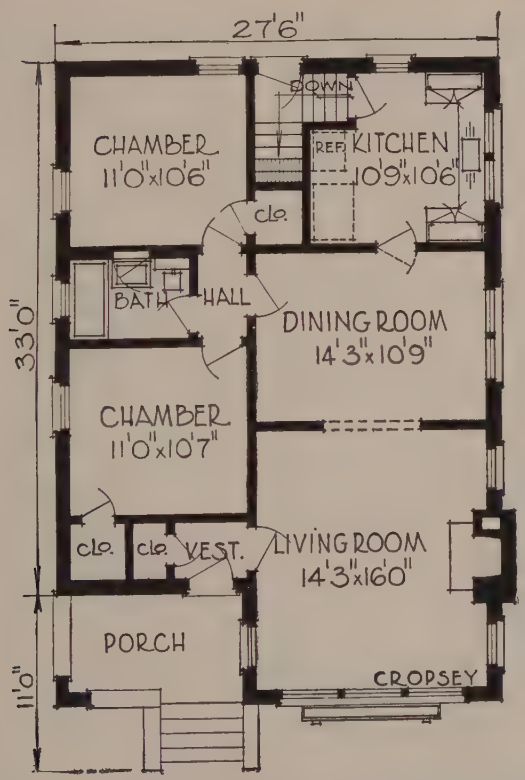
5 Rooms and Bath



The CROPSEY

FACE brick is used for the outside walls of this attractive bungalow. The rooms are carefully and conveniently planned with a view of giving the utmost comfort and reducing the housekeeping work. The kitchen arrangement is unusually handy and pleasing.

Interior View of Kitchen

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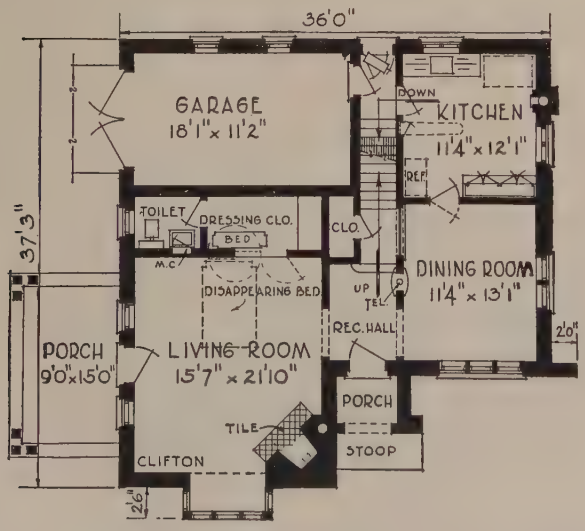
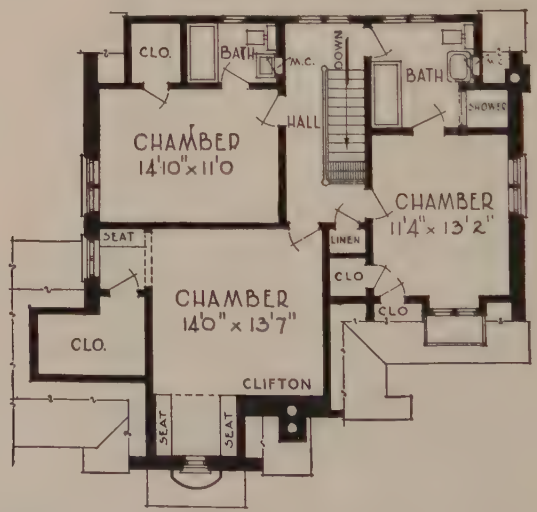
6 Rooms, 2 Baths, Toilet, Dressing Closet and Garage

The CLIFTON

COMMON BRICK, random laid, forms this attractive exterior. Both floors are thoughtfully planned. There are two bathrooms upstairs and a toilet on the first floor. A disappearing bed is in the living room and modern built-in features in the efficiency kitchen. Rooms are large with well grouped windows, and ample closet space.





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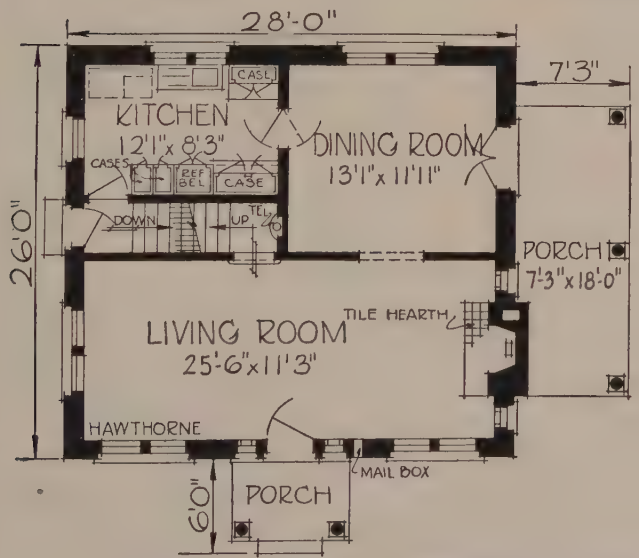
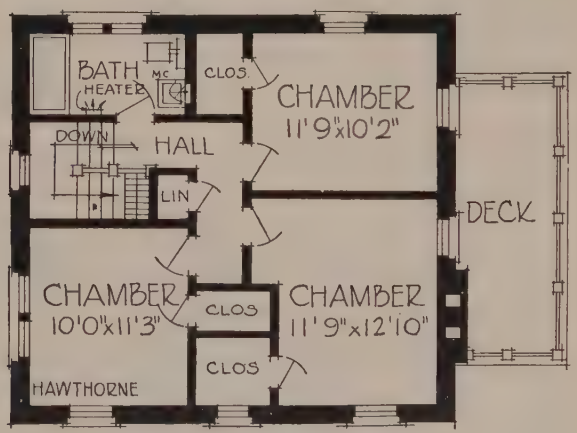
6 Rooms and Bath

The HAWTHORNE

THIS good looking home is built of face brick. The entrance is inviting and the large side porch is both attractive and useful. The large living room has a fireplace at one end and a handy built-in telephone cabinet at the foot of the stairs. Kitchen is equipped with numerous built-in conveniences and a wall heater is built into the bathroom partition.





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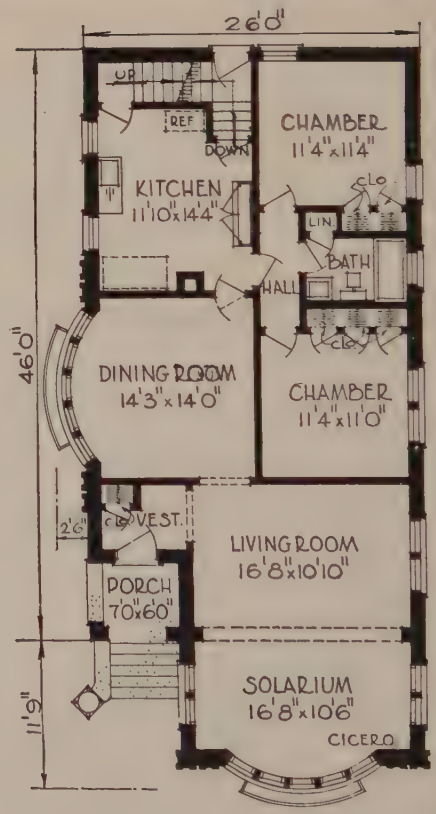
5 Rooms, Bath and Solarium

The CICERO

A PLEASING bungalow of face brick with roof of brilliant tile. There is a large solarium, an interesting entrance, and unusual dining room. A glance at the floor plan will prove the careful thought given to this interior arrangement.

Interior View of Solarium



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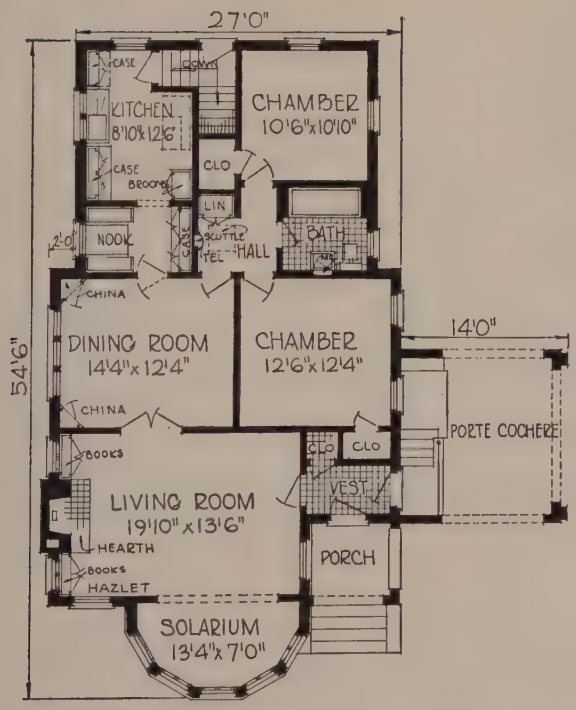
5 Rooms, Bath and Solarium

The HAZLET



FACE BRICK is used for the exterior of this attractive home with its sloping tile roof and impressive bay-window and porte cochere. The large living room has fireplace with book cabinets at each side. Dining room has built-in corner china cabinets. There is a dining nook adjoining the kitchen with built-in cases. Kitchen has broom closet and other built-in features. A phone cabinet is built into wall of hall. There is a tiled bathroom between two large chambers. Note the large solarium separated from living room by a broad archway.

A corner of the dining room

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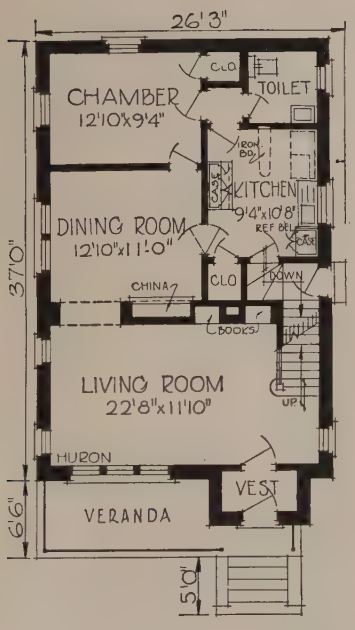
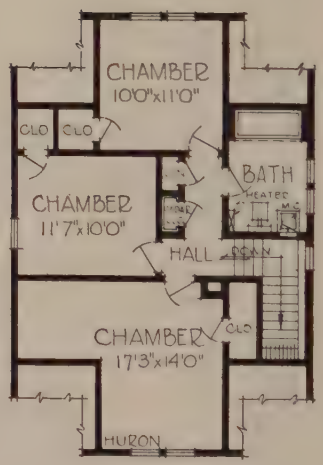
7 Rooms, Bath and Toilet

The HURON



FACE BRICK for the first story is combined with shingles and half-timbered stucco for the second to form the exterior of this attractive home. There is an awninged veranda tastefully railed with iron. An inviting entrance and an interior that is so convenient, so comfortably arranged that nothing is left to be wished for. Notice the living room with built-in book shelves. There is a model kitchen with many built-in features and a handy toilet on first floor. Upstairs there are three chambers, a bathroom with built-in wall heater, a cedar closet, linen closet, and ample clothes closets.



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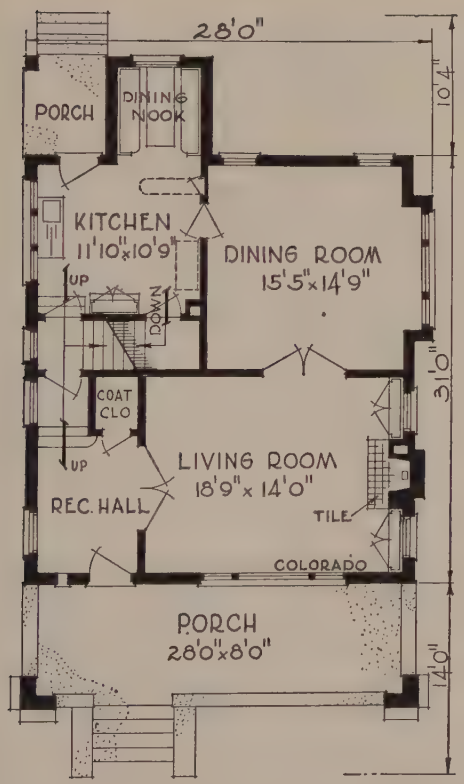
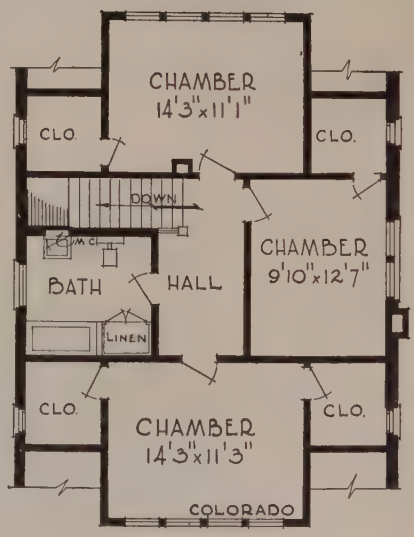
6 Rooms and Bath



The COLORADO

A SOLID, substantial home of face brick construction with roomy front porch and attractive dormer. This type of home never grows old, particularly with such a well planned interior and so much in the way of convenience and comfort



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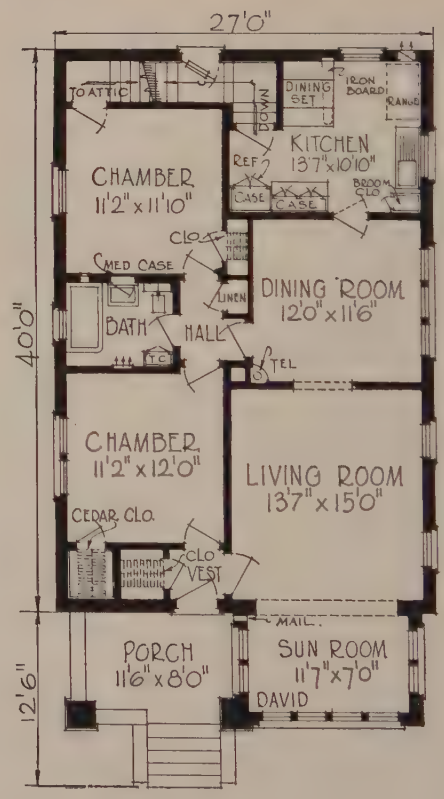
5 Rooms, Bath and Sun Room

The DAVID

THIS type of bungalow will always be popular both in city and suburban communities. Face brick is used for the exterior and the interior is well arranged, utilizing many built-in conveniences, dining nook, spacing-saving closets, etc.

Interior of Sun Room



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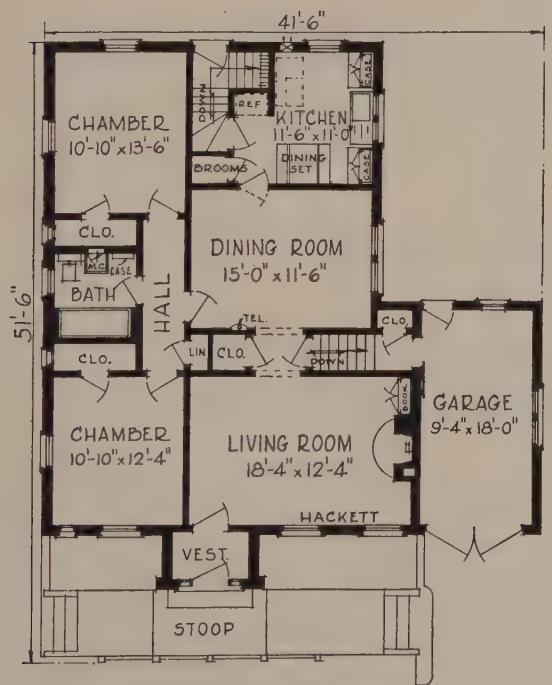
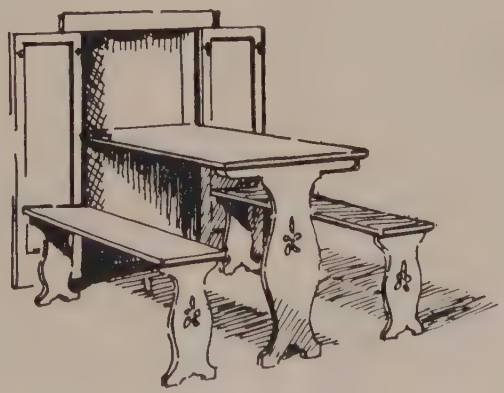
5 Rooms, Bath and Garage

The HACKETT



FACE BRICK, a clay tile roof, shuttered windows, and garage completes this effective home. Note the railed stoop, the large living room with fireplace, the model bathroom with cabinet, the efficiency kitchen with dining set, broom closet and cabinets. There are two chambers, a linen closet, and clothes closets.



The handy dining set

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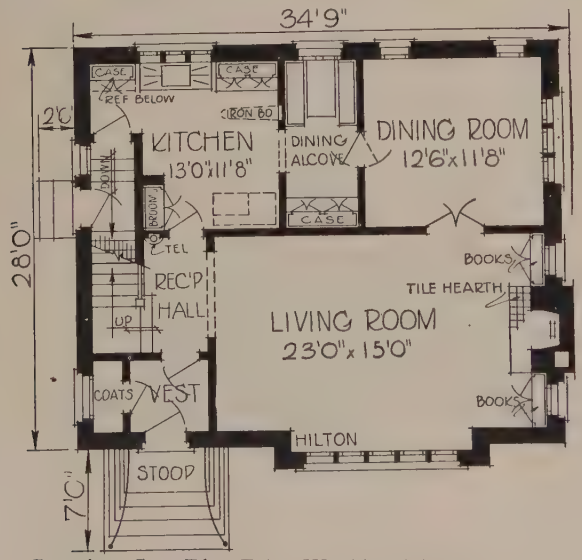
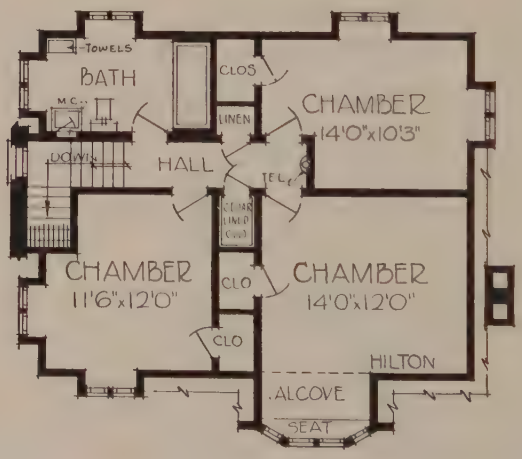
6 Rooms, Bath and Dining Alcove

The HILTON

FACE BRICK walls, slate roof, and careful grouping of windows are combined in designing this attractive home. Metal fencing is used at left to enclose yard. Living room is large and has fireplace flanked with built-in book cabinets. Kitchen contains built-in utility and ironing board cabinets. There is a dining alcove, large reception hall, cedar lined closet, linen closet, built-in phone cabinet, model bathroom and built-in seat in alcove on second floor.





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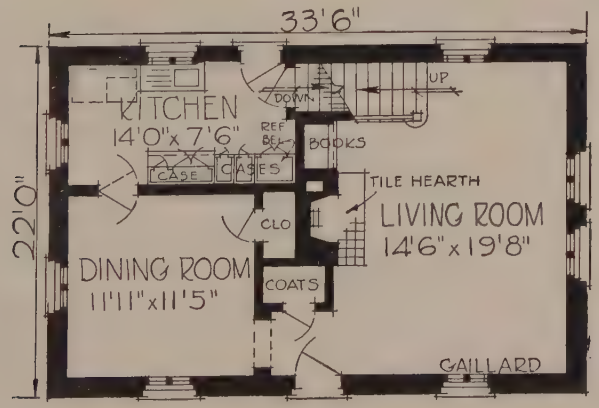
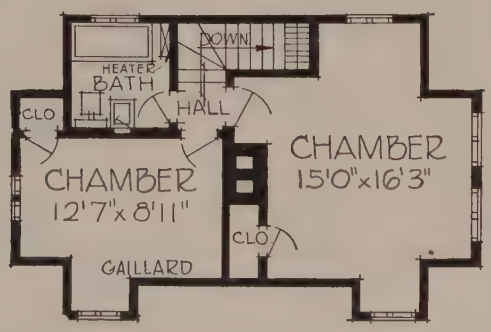
5 Rooms and Bath

The GAILLARD

HERE is an attractive French cottage of face brick with mottled asphalt shingled roof and a pleasing arrangement of dormers. The floor plans show the splendid interior arrangement. The large living room has fireplace and convenient book shelves. The model kitchen is equipped with built-in features. There are two large chambers and bath with built-in wall heater and two large closets. This home lacks nothing in architectural merit or interior arrangement and convenience.





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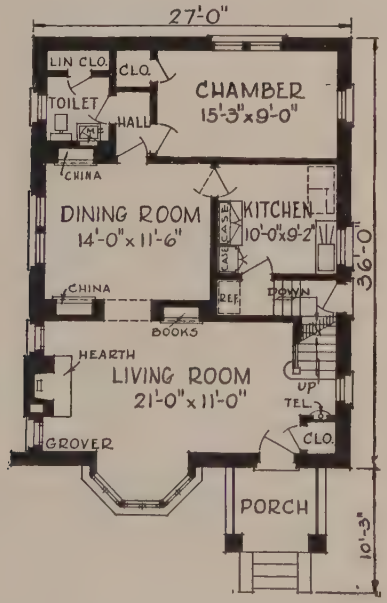
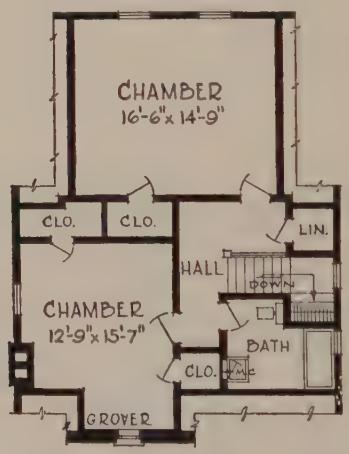
6 Rooms, Bath and Toilet

The GROVER

HERE is an attractive face brick home with sloping roof lines and attractive gables. Note the bay window of living room, the railed porch and the inviting entrance. Living room has fireplace, built-in book shelves and phone cabinet. A large closet is built in a corner. Dining room has built-in shelves for china. There are three large chambers.





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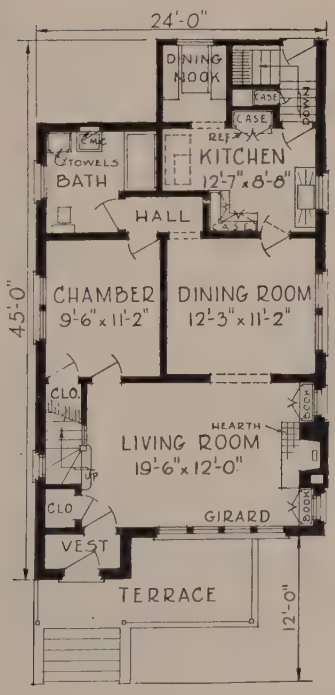
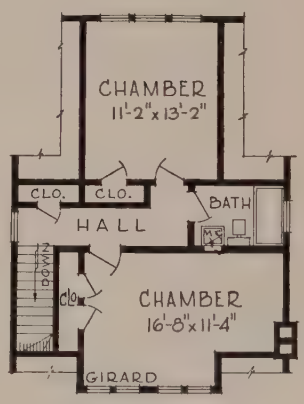
6 Rooms, 2 Baths and Dining Nook

The GIRARD



THIS attractive yet practical home consists of face brick walls, half-timbered at the entrance and shingled at the gables on the sides and at dormer. The terrace has a railing of architectural iron. Large window groups admit plenty of light to the well arranged interior. A fireplace with built-in bookcases on each side gives the living room an air of coziness and cheer. The kitchen equipped with built-in cabinets opens into a dining nook. One bedroom and bathroom are located on the first floor. Two large bedrooms and another bathroom occupy the second floor.



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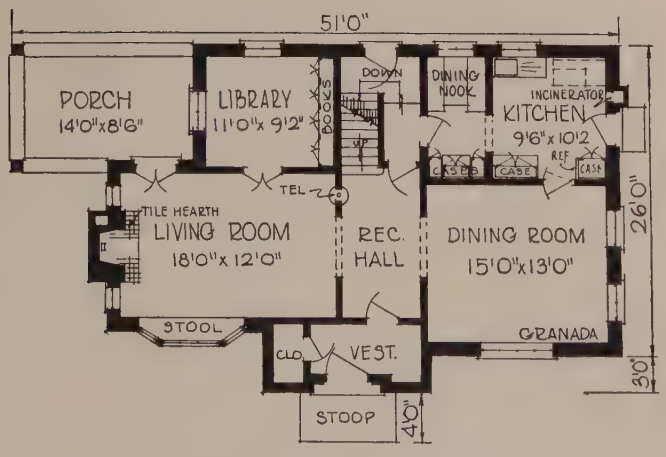
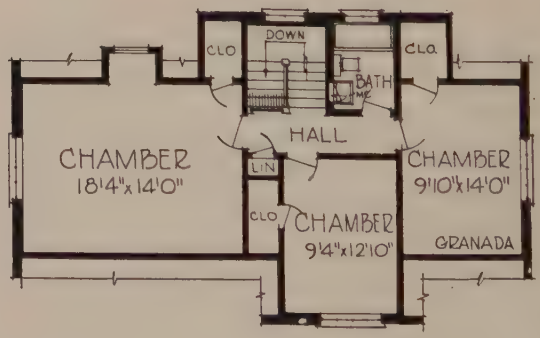
7 Rooms, Bath and Dining Nook

The GRANADA

FACE BRICK forms the exterior of this exceptional home with its inviting porch at one end, its large and well arranged rooms on both floors. Living room has fireplace and there is a wall phone cabinet available from either side. Off the living room is a large library with built-in book cases, a model kitchen with built-in conveniences, incinerator and an adjoining dining nook. Upstairs there is a very large and two smaller chambers.





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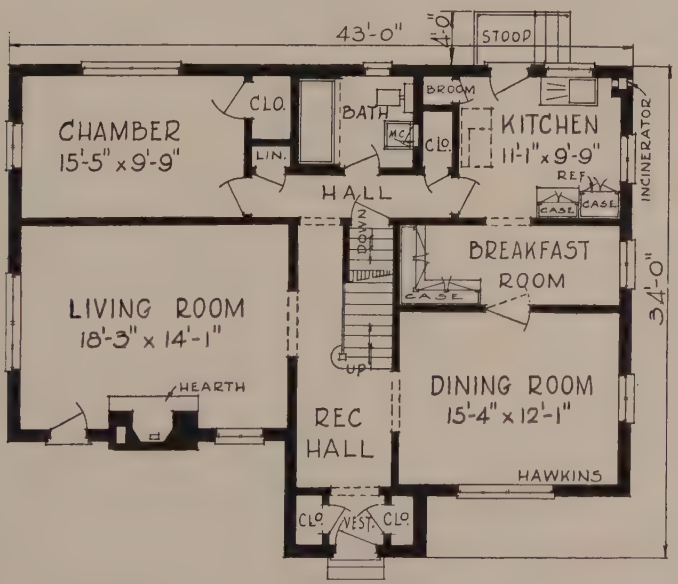
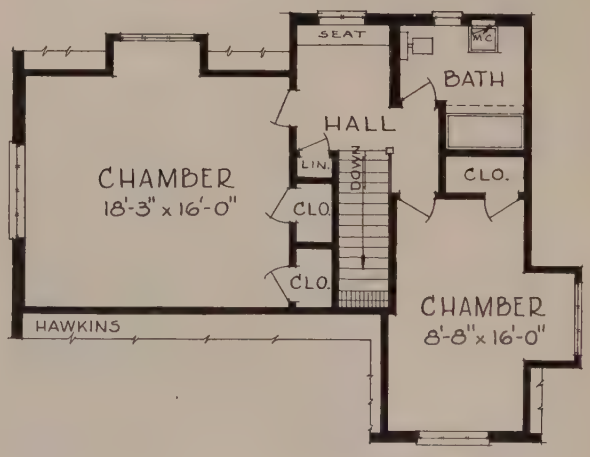
6 Rooms, 2 Baths and Breakfast Room

The HAWKINS

FACE BRICK, brick-capped stone chimney, inviting entrance, well arranged windows, and attractive dormers—are features of this attractive home. Note the splendid interior arrangement. The large living room with fireplace; the large breakfast room with built-in cabinet, the two bathrooms, the kitchen cabinets, incinerator, broom closets, etc.





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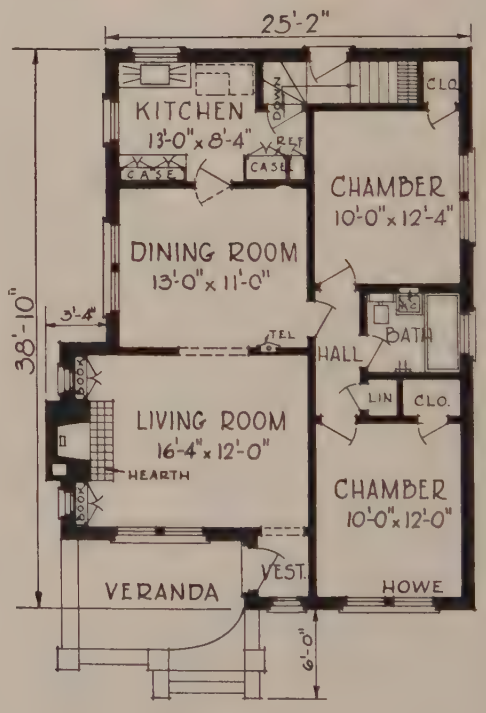
Five Rooms and Bath

The HOWE

FACE BRICK, with a stucco treatment at upper portion of gable, are effectively combined for the exterior of this attractive home. There is a walled veranda and well placed windows. Living room has fireplace and built-in book cabinets on each side. Kitchen has built-in cabinets. There is a model bathroom, two comfortable chambers and a large dining room with built-in telephone cabinet.

Fireplace in living room



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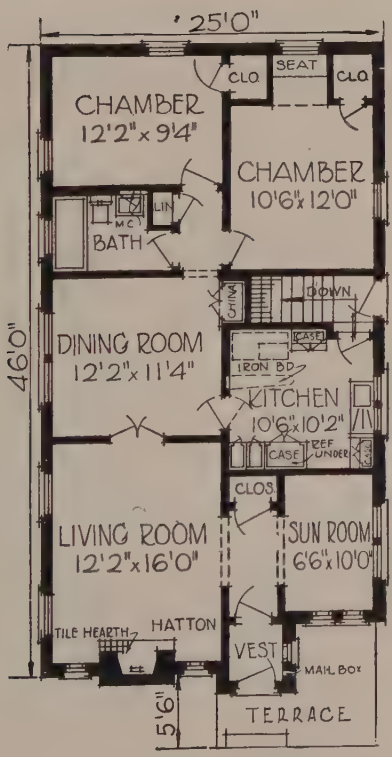
5 Rooms, Bath and Sun Room

The HATTON

FACE BRICK for side walls and chimney are used for the exterior of this pleasing home. A mail-box is built into vestibule wall and there is a tiled hearth in living room. A cozy sun room is located opposite living room. Kitchen has ironing board cabinet and other built-in features. There is a model bathroom, two chambers, one with built-in window seat and there is ample closet room. The awning over terrace is effective.



A handy built-in window seat

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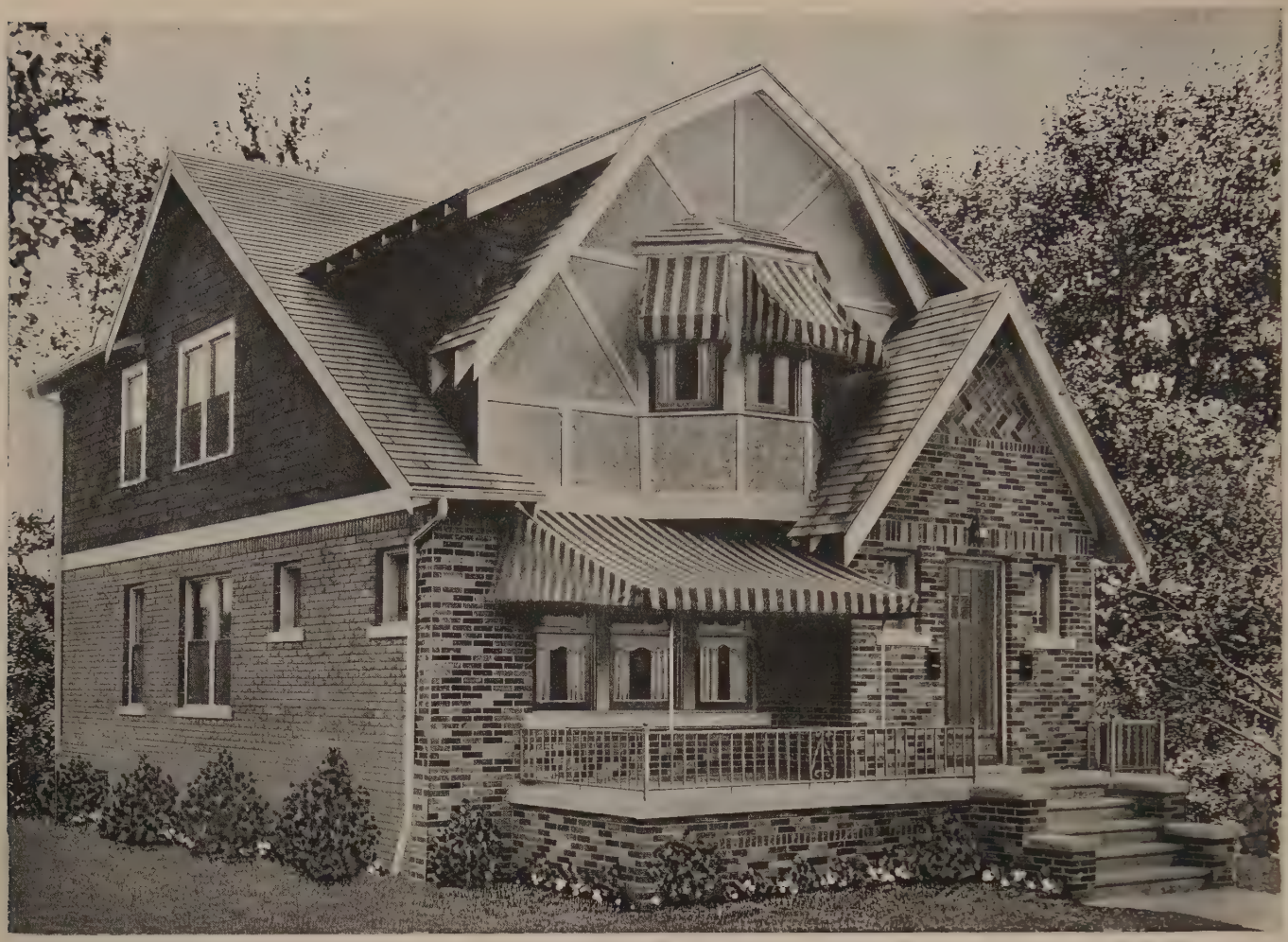
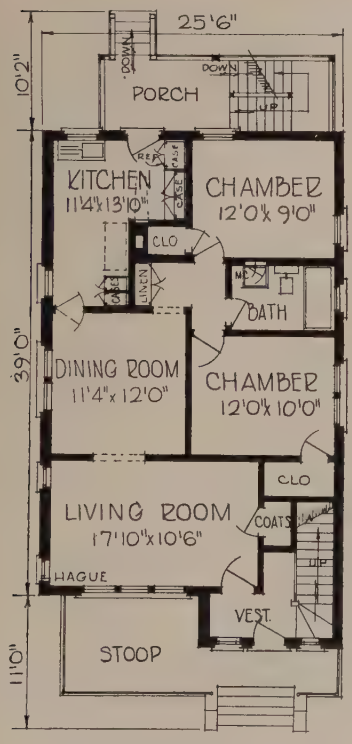


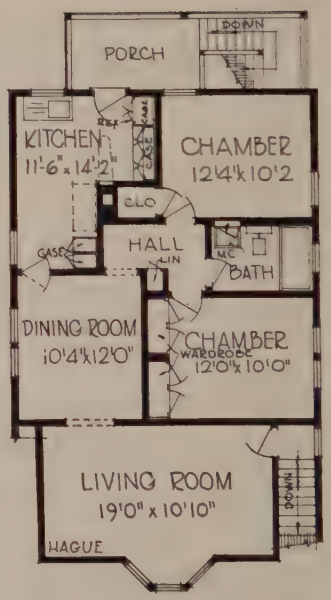
Two Apartments

The HAGUE

THE pleasing design of this attractive two-family home has been accomplished by an effective use of face brick and shingles with a gable of half-timbered stucco. Both floor plans have large living rooms, rear porches and plenty of closet space. There are model bathrooms on both floors, a built-in wardrobe in the front chamber of second floor and well ventilated kitchens with sufficient cabinet space.

EACH FLOOR HAS 5 ROOMS, BATH AND SUN PORCH





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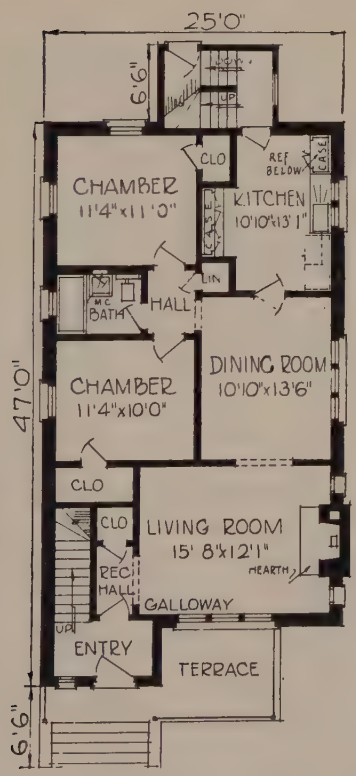
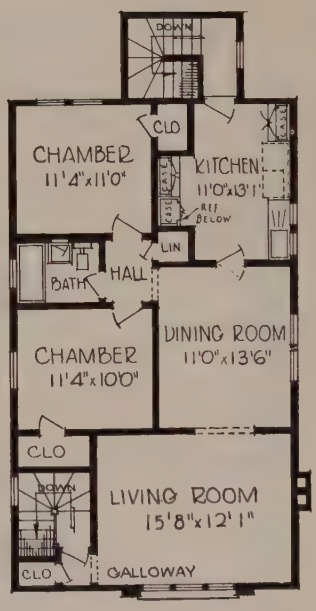
Two Apartments



The GALLOWAY

HERE is an exceptional home built of face brick with shingled roof and shingles at the second story. Notice the attractive railed terrace, the inviting entrance and the gables which lend so much to the exterior charm of this home. Living rooms are large and there is a fireplace on the lower floor; the kitchens have built-in cabinets; bedrooms are comfortable and there are model bathrooms, linen closets and numerous clothes closets. From outside appearances, one would never guess that this home contains two apartments of such unusual convenience and comfort.

EACH FLOOR HAS 5 ROOMS AND BATH



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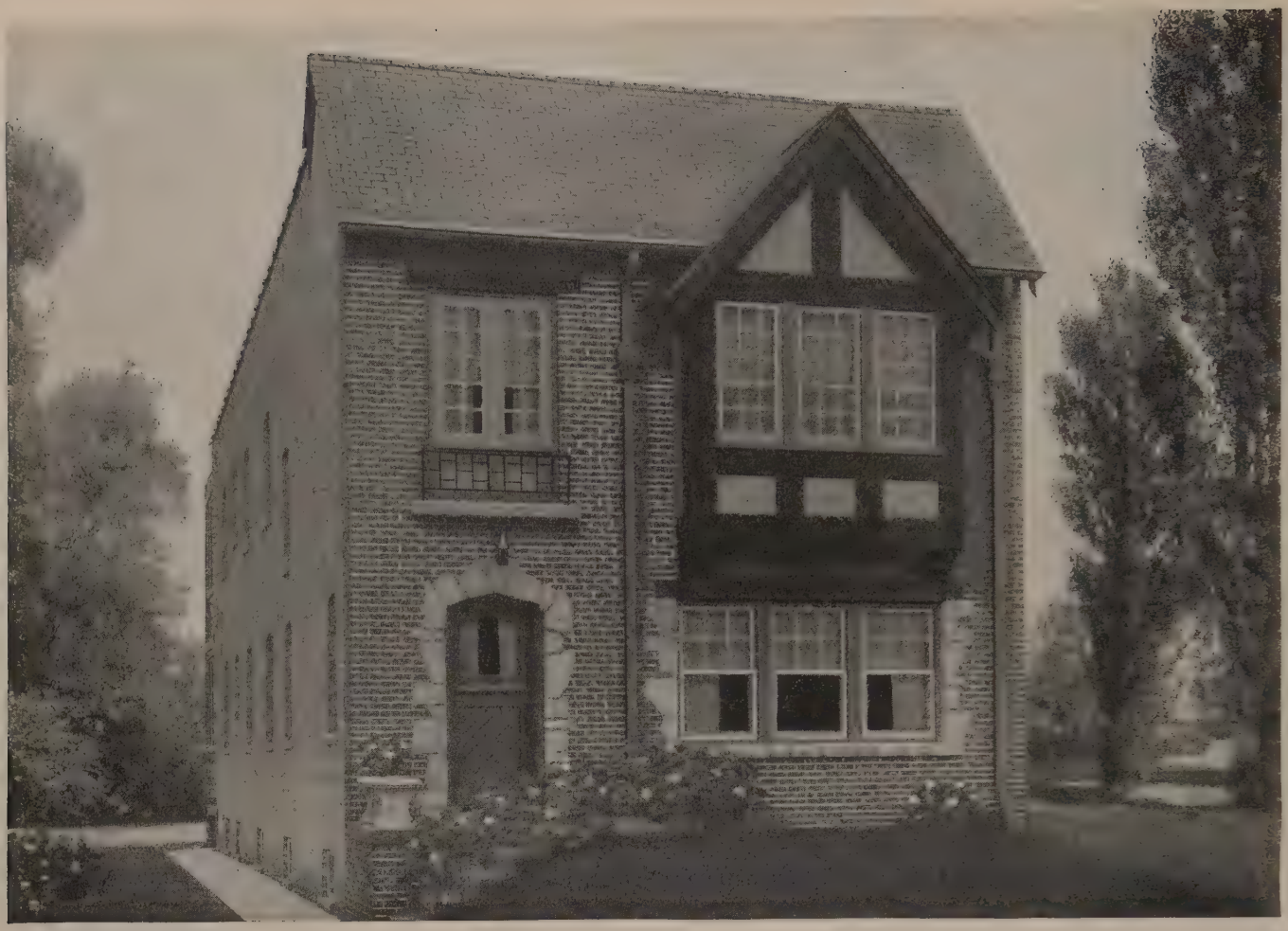
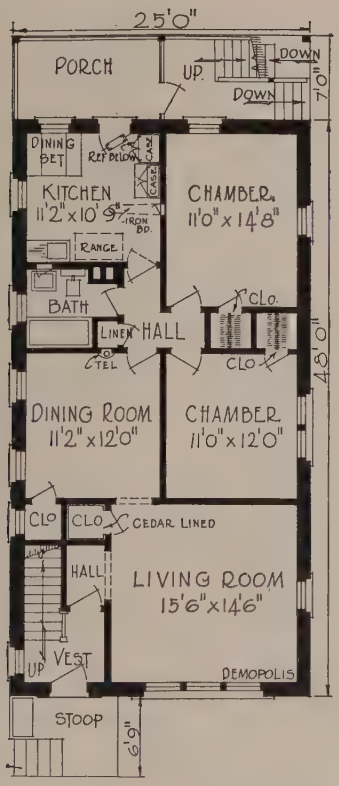


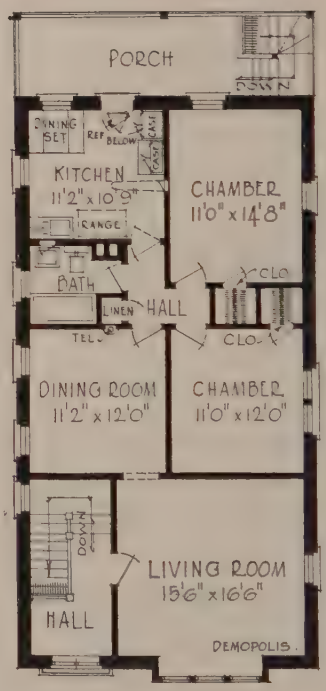
Two Apartments



The DEMOPOLIS

THIS is rather an unusual two-apartment dwelling, having much to recommend it in architectural merit and charm. Each floor has five rooms and bath and the room arrangement is exceptionally good. Both as a residence and as an investment the Demopolis has much to offer in every particular.

EACH FLOOR HAS FIVE ROOMS AND BATH



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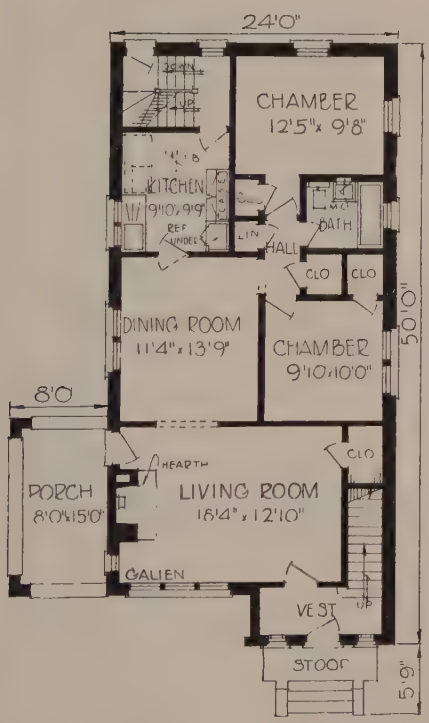
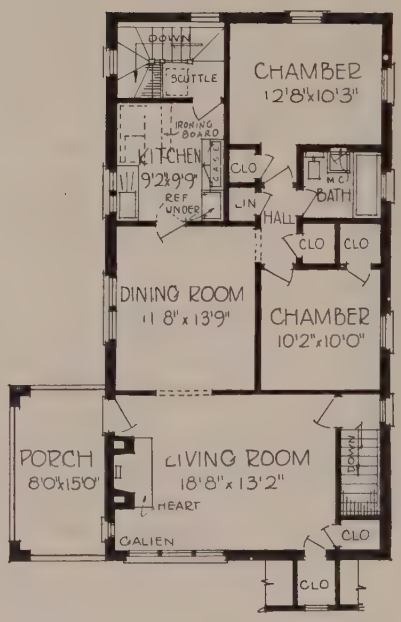
Two Apartments

The GALIEN



AN ATTRACTIVE two-apartment home built of face brick and covered with a slate roof. Note the stucco and half-timbered treatment of gable and dormer, large open porch, the attractive entrance. Living rooms have fireplaces and convenient closets. Kitchens have utility cabinets. There are model bathrooms. It would be hard to find a home of this type that offers more in exterior appearance and interior comfort.

EACH FLOOR HAS 5 ROOMS AND BATH



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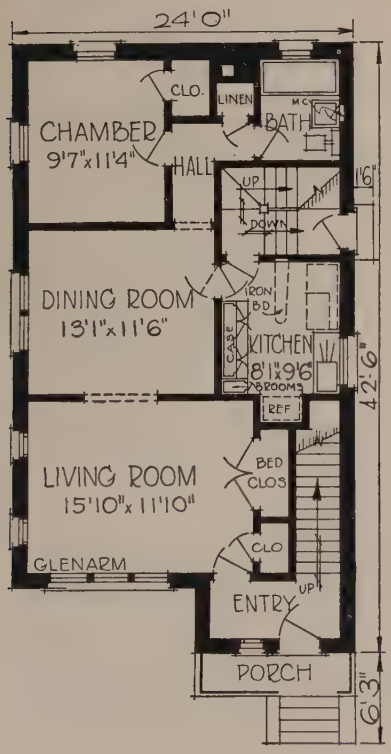
Two Apartments



The GLENARM

FACE brick for the first story with stucco and shingles for the second form the exterior of this attractive two-apartment home. Its inviting entrance is enclosed by rails of ornamental iron. The living rooms have bed closets. There are efficiency kitchens with such built-in utility features, broom and ironing board cabinets. There are model bathrooms, linen and clothes closets of ample size and sufficient number.

EACH FLOOR HAS 4 ROOMS
AND BATH

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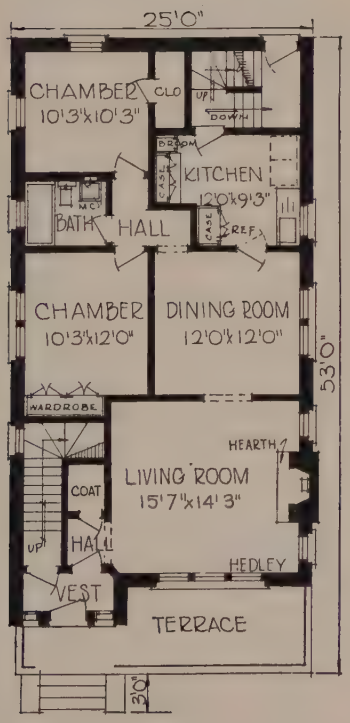
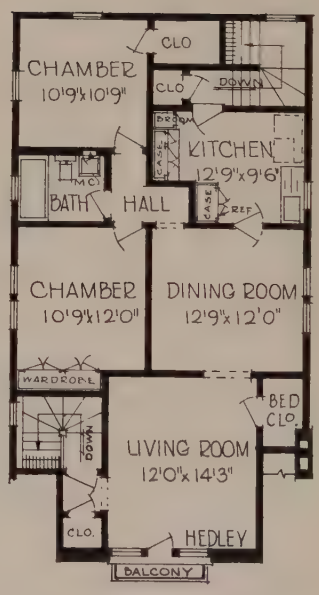
Two Apartments

The HEDLEY



FACE BRICK is effectively used for the exterior of this attractive two-apartment home. Notice the touch of stucco over the doorway and at dormers and side gables. There is an attractive balcony at the second floor entered through doorway from living room. Kitchens have broom and utility cabinets. There are two model bathrooms. Bedrooms are a comfortable size, one of them on each floor having built-in wardrobes. There is plenty of closet space.

EACH FLOOR HAS 5 ROOMS AND BATH



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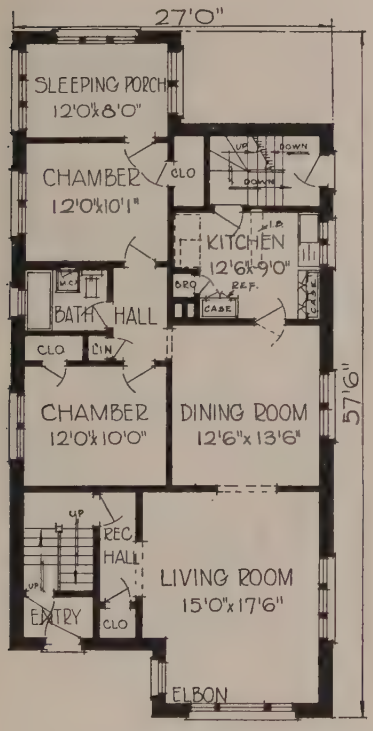
Two Apartments

The ELBON



ALTHOUGH having all the appearances of a modern colonial residence, this attractive home of face brick with a particularly inviting entrance contains two well planned apartments. Large living rooms, modern bathrooms, built-in linen closets, clothes closets, model kitchens with built-in cabinets, and sleeping porch for each floor are desirable features. Homes of this type offer splendid, convenient and comfortable living facilities and provide a steady income.

EACH FLOOR 5 ROOMS, BATH AND SUN PORCH

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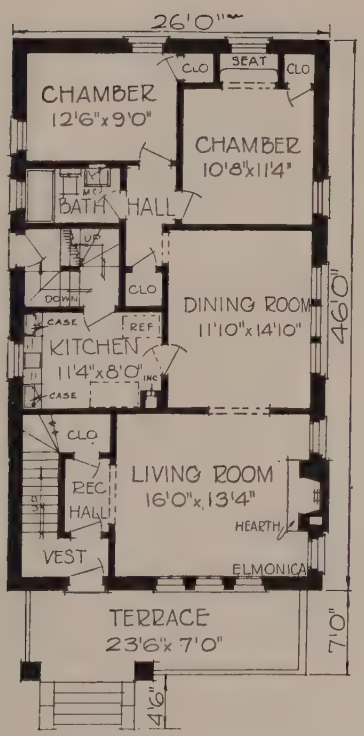
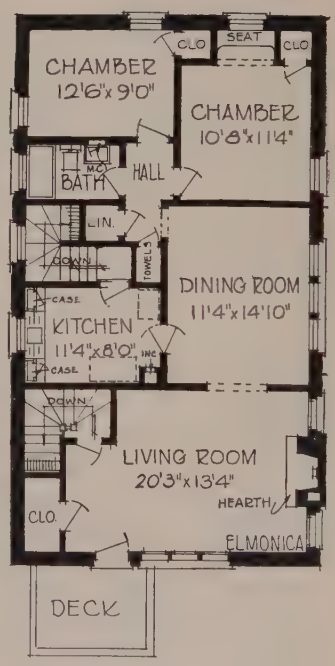
Two Apartments

The ELMONICA

FACE BRICK is used for the exterior walls of this attractive two-apartment home. Note the ornamental rails at terrace and deck, the well grouped windows, the well arranged interior. Both living rooms have fireplaces and the built-in kitchen features include cabinets, etc. One bedroom on each floor has a built-in window seat. There are model bathrooms, linen closets and clothes closets in sufficient number. Homes of this type are good to live in as well as affording a splendid investment.

EACH FLOOR HAS 5 ROOMS
AND BATH





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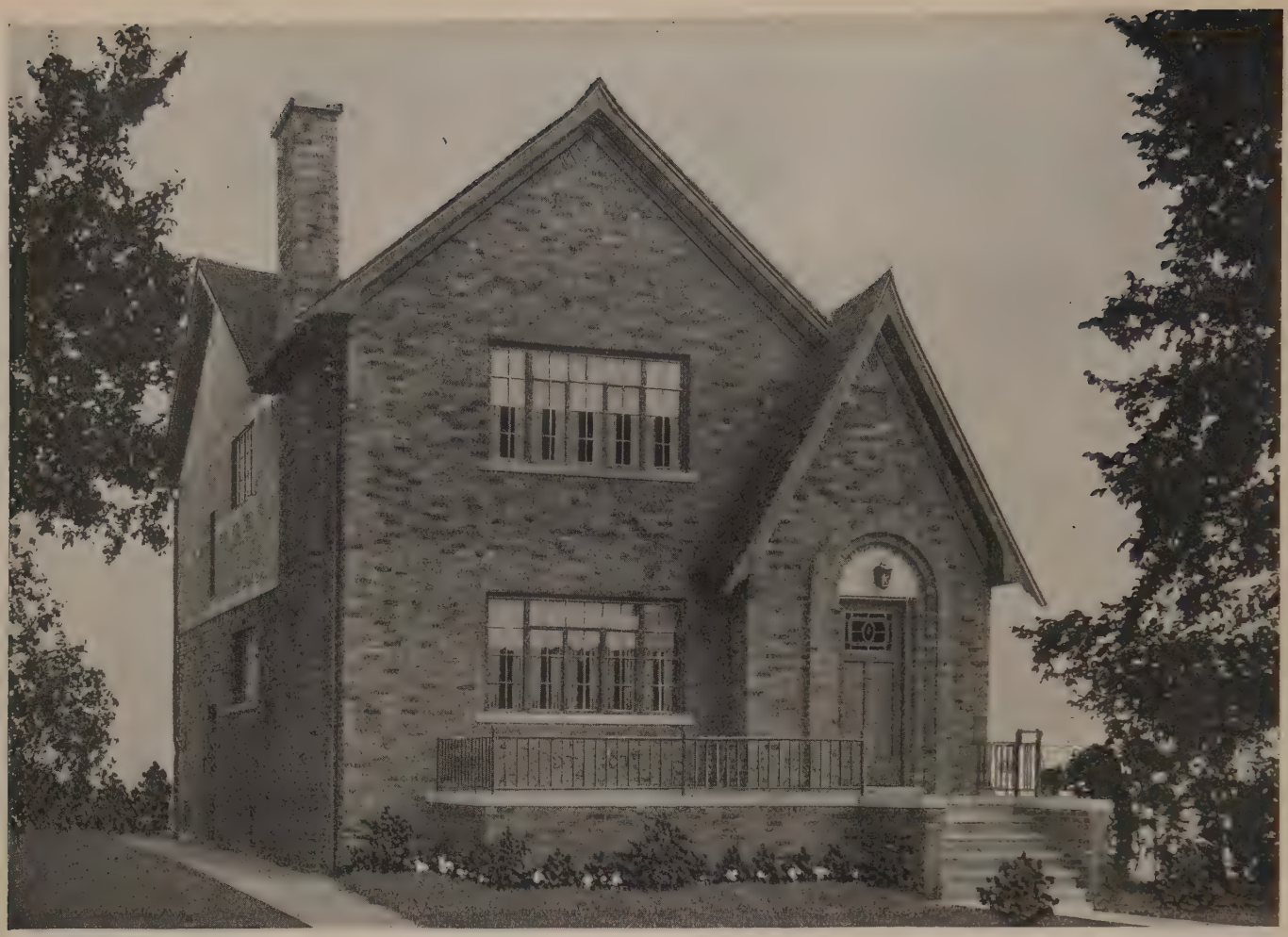
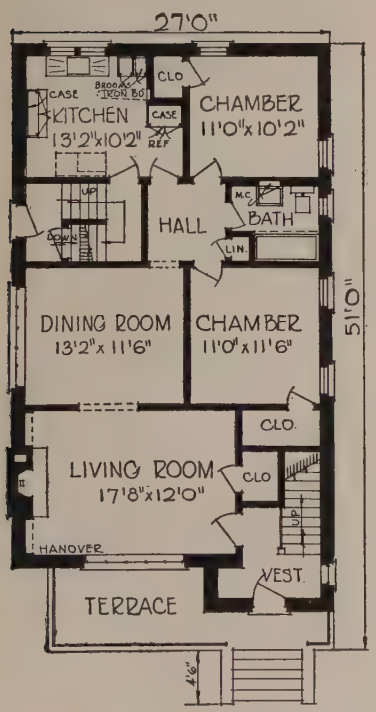


Two Apartments

The HANOVER

THERE are two apartments in this attractive home of face brick with its railed terrace, well grouped windows and inviting entrance. Living rooms are large with fireplace. There are efficiency kitchens with built-in broom, ironing board and utility cabinets, large bedrooms, model baths, etc. Nothing has been overlooked in this home that will increase convenience and comfort.

EACH FLOOR HAS 5 ROOMS AND BATH



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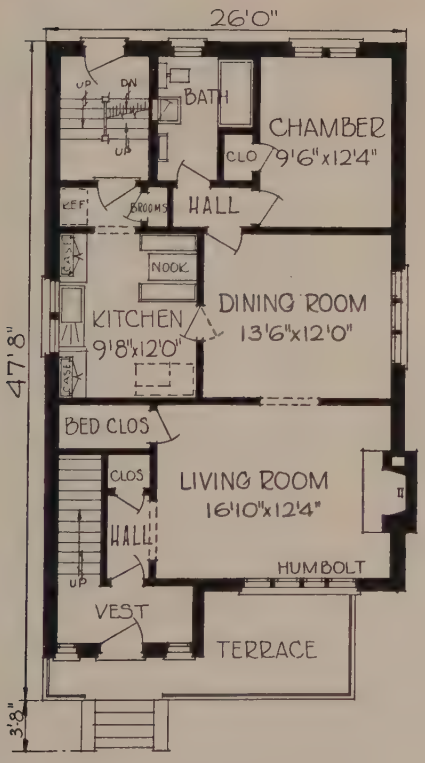
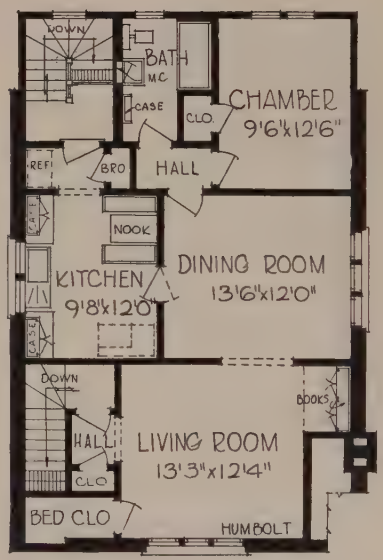
Two Apartments

The HUMBOLT

FACE BRICK forms the charming exterior of this two-apartment home. The effective roof lines and well grouped ornamental windows are pleasing. The terrace is large and railed. There is ornamental window at each side of entrance. Living room is large and has fireplace and bed closet. Kitchen has built-in nook and convenience cabinets. Bedrooms are comfortable. There are model bathrooms with built-in cases. In upstairs living room are built-in book cabinets.





EACH FLOOR HAS 4 ROOMS
AND BATH

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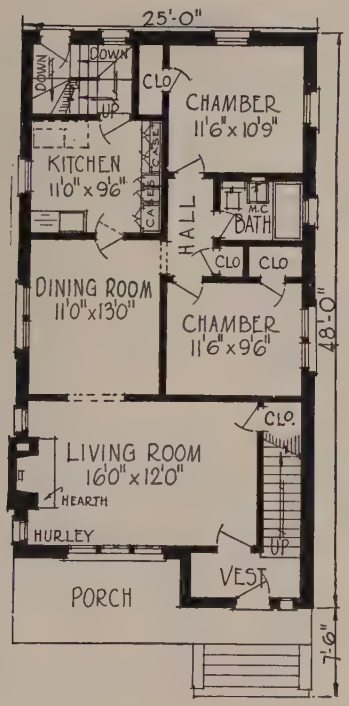
Two Apartments

The HURLEY

IN DESIGNING this attractive home, brick and shingles have been effectively used. Notice the open porch of the first floor and the balcony at second floor. A careful study of the plans will show an exceptional room arrangement for both floors giving large living rooms, efficiency kitchens with built-in cabinets, model bathrooms and ample closet space. Homes of this type offer unusual living comfort as well as an exceptionally good investment that insures a steady income from one or both apartments.

EACH FLOOR HAS 5 ROOMS AND BATH



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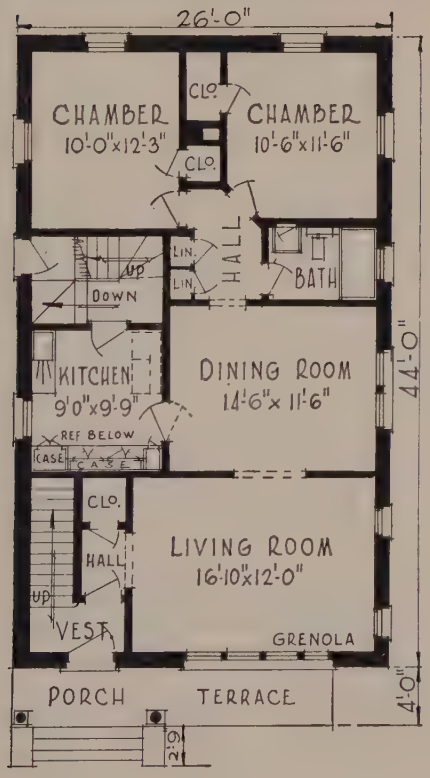
Two Apartments



The GRENOLA

EACH floor is conveniently planned for utility and comfort. Note the attractive dormer with ornamental railing; the inviting entrance and terrace. Also the splendid arrangement of rooms, the efficiency kitchens, the bed closet off dining room on second floor, the model bathrooms, the ample closet space, and linen closets. The attractive exterior is well constructed of face brick, shingles and siding.

FIRST FLOOR HAS 5 ROOMS AND BATH. SECOND FLOOR HAS 4 ROOMS AND BATH

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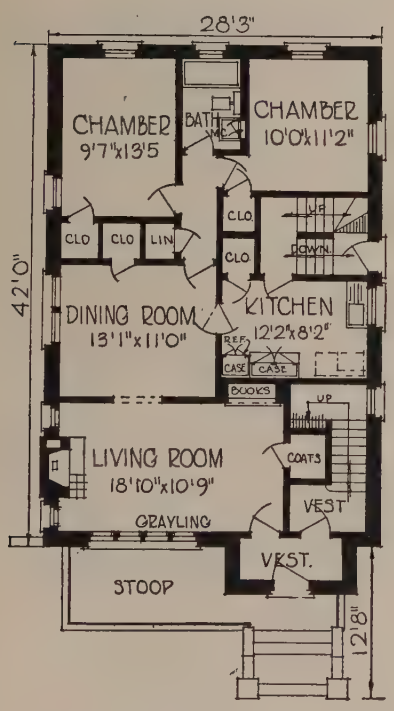
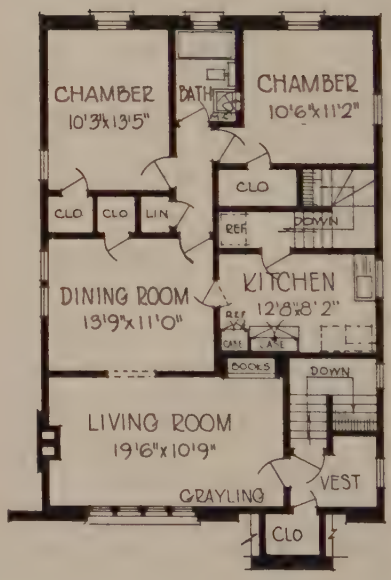
Two Apartments

The GRAYLING



THIS attractive home of brick and shingles has two very complete apartments. Notice the attractive entrance and the railed terrace, the well grouped windows. Living room is large and has fireplace and built-in book cabinet. There is a large coat closet in the living room. Kitchen has built-in cases and the model bath is located at the rear between the two bedrooms. There are ample linen and clothes closets on both floors and the layout of the two foors are practically the same.

EACH FLOOR HAS 5 ROOMS
AND BATH



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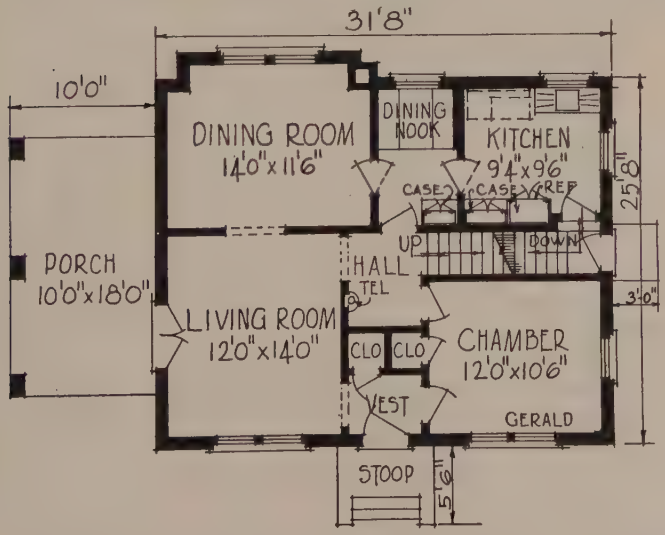
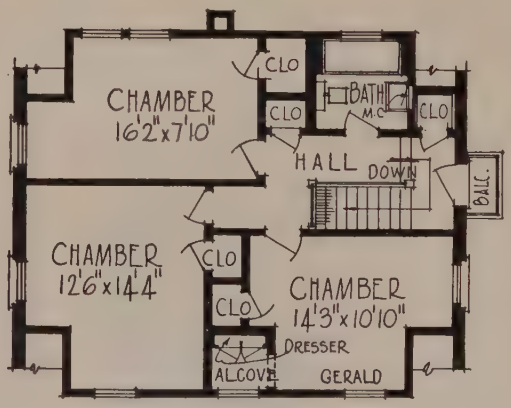
7 Rooms, Bath, Alcove and Dining Nook

The GERALD

THIS attractive home with the dormer that so pleasingly breaks the sharply sloping lines of roof is built of structural clay tile. Note inviting entrance, the well grouped windows. There is a large porch off living room, and the kitchen has built-in cabinets and other features. In the hall is a phone cabinet and there is a chamber on the first floor. Upstairs are three chambers, the front one having an alcove with built-in dresser, in closet. There is a model bathroom and additional closets in hallway and bedrooms.





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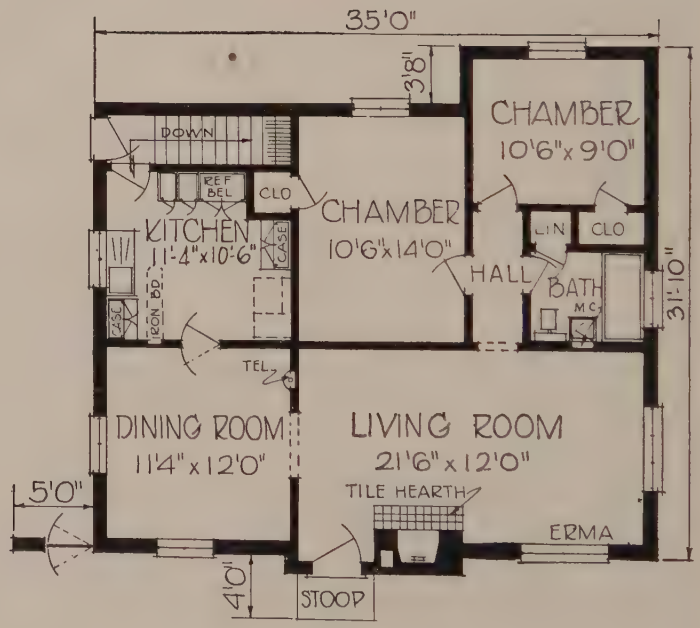
5 Rooms and Bath

The ERMA

WONDERFUL comfort enclosed in an attractive exterior of structural clay tile, with well grouped windows and an inviting entrance. Note the large living room with tiled hearth, the efficiency kitchen with built-in ironing board and other cabinets, the modern bathroom with linen closet. There is a phone cabinet built into dining room, two large chambers and ample closet space. An unusual home both in appearance and interior arrangement.

Linen closet in bath room



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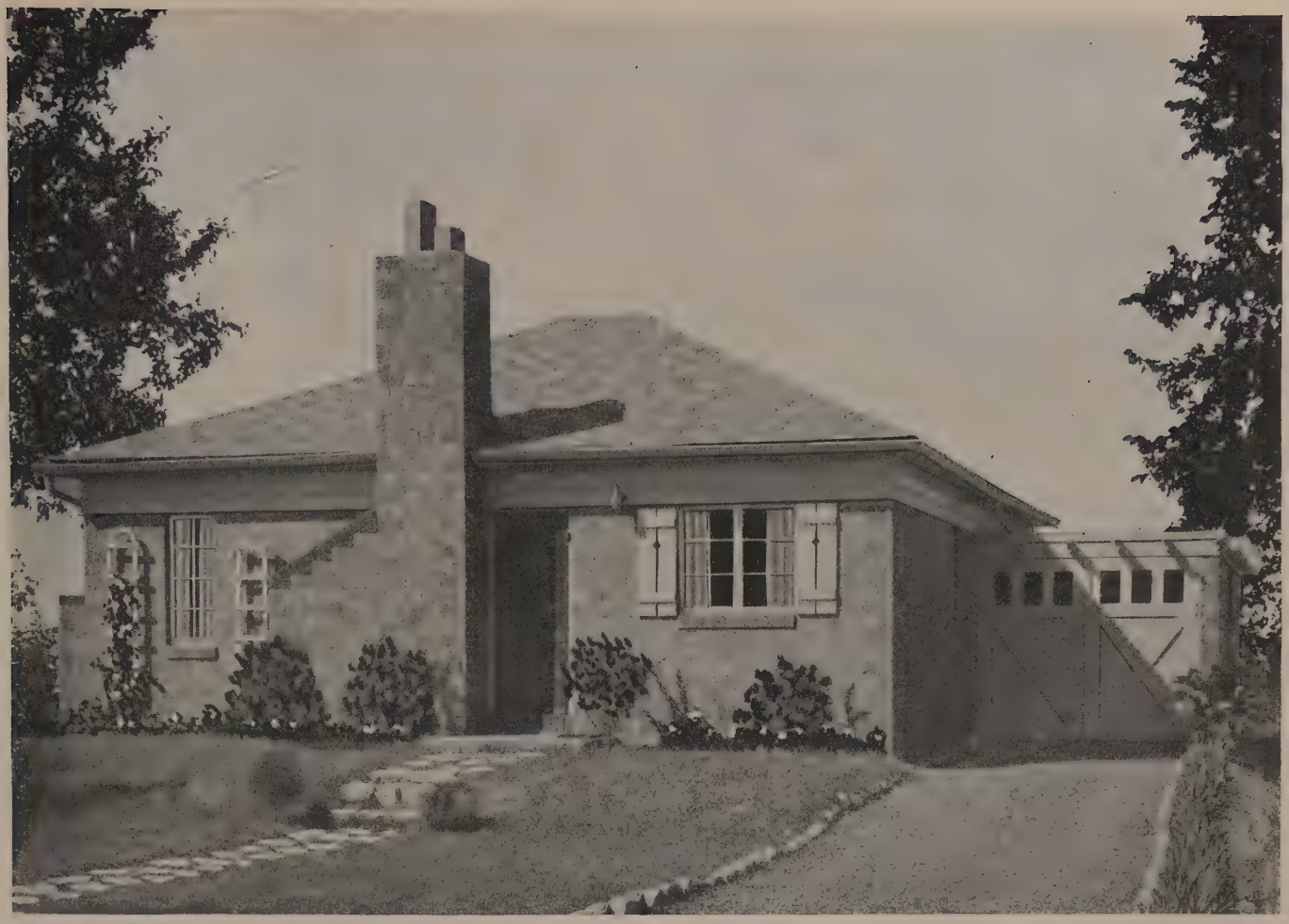
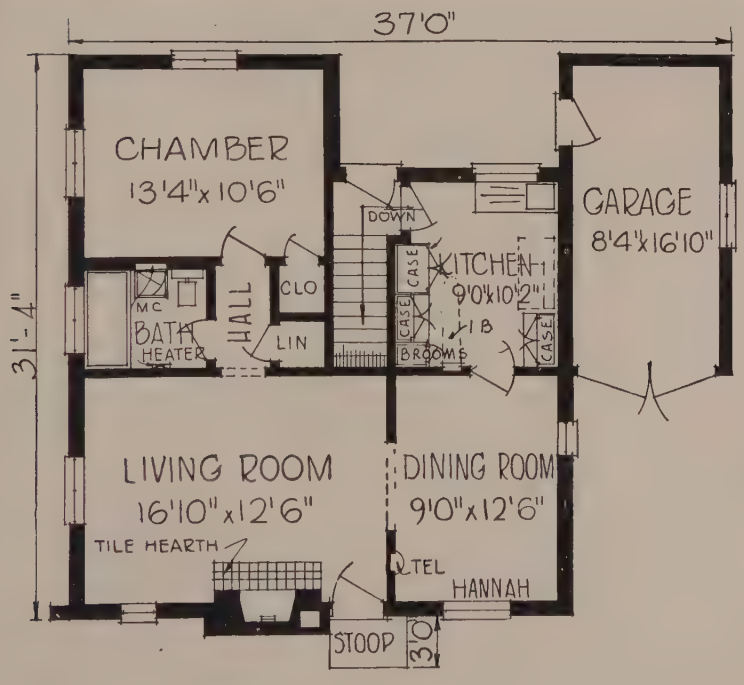
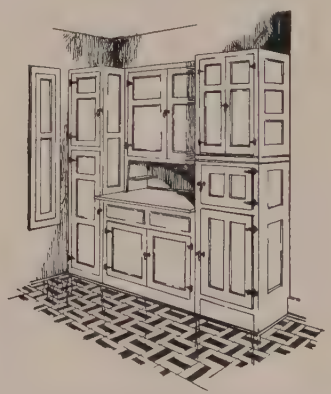


4 Rooms, Bath and Garage

The HANNA



THE pleasing exterior of this attractive bungalow with its built-on garage is constructed of structural clay tile. Lines are simple but effective. Living room has tiled hearth, and a phone nook is built-in in dining room wall. The kitchen has built-in cabinets. There is a bathroom with wall heater, and one large chamber, with clothes closet. A linen closet is located in the hall.



A kitchen cabinet of convenience

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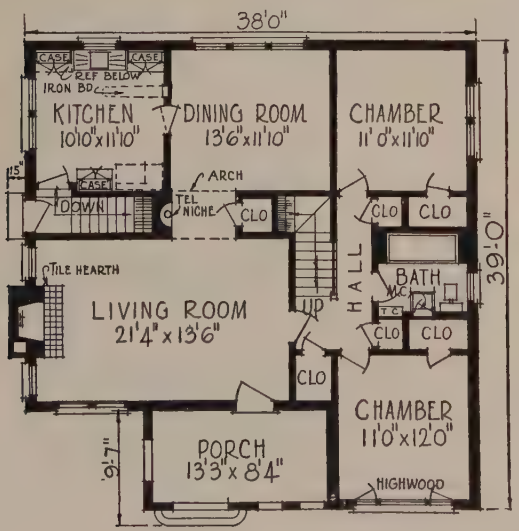
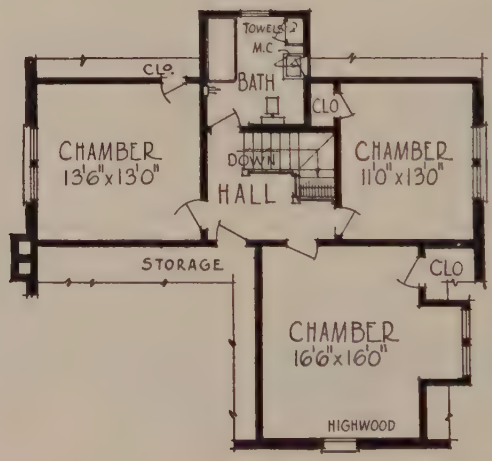
8 Rooms and 2 Baths

The HIGHWOOD

In this particularly pleasing and attractive home structural clay tile is used for the exterior. Notice the inviting porch and entrance, the large living room with tile hearth, the phone niche off living room. Kitchen has built-in ironing board and utility cabinets and there are two large chambers on the first floor with a modern bathroom between. Upstairs are three large chambers and another bathroom with a built-in towel cabinet.





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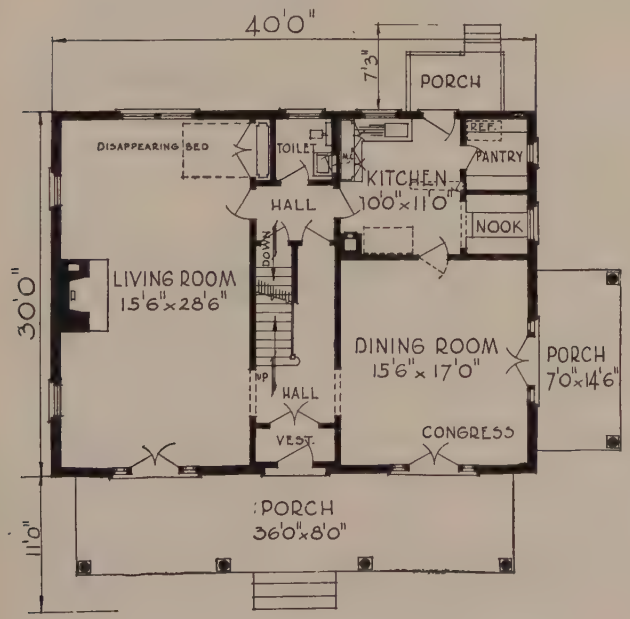
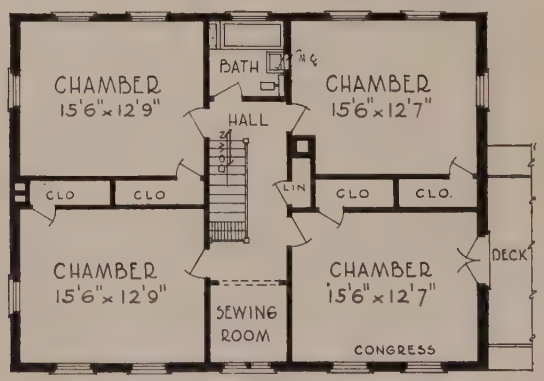
7 Rooms, Bath, Sewing Room and Dining Nook

The CONGRESS

THIS substantial home of structural clay tile offers all the convenience and living comfort of the most palatial home. Living room has a disappearing bed and there are numerous other convenience features. Note the sewing room on the second floor.





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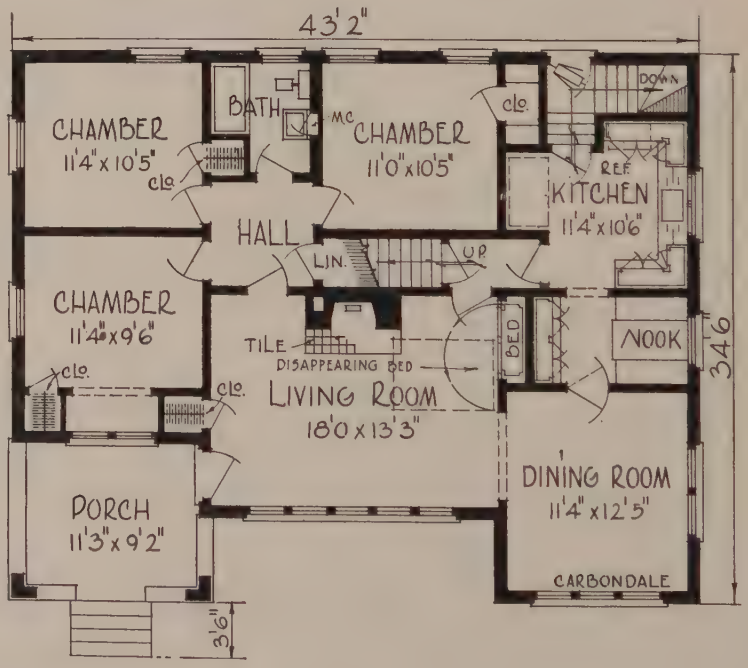
6 Rooms, Bath and Dining Nook.

The CARBONDALE

GLAZED tile and tile roof make a pleasing and substantial combination. The well planned interior offers every modern convenience such as disappearing bed, space saving closets, built-in kitchen furniture and rear door package receptacle.

Interior view of kitchen



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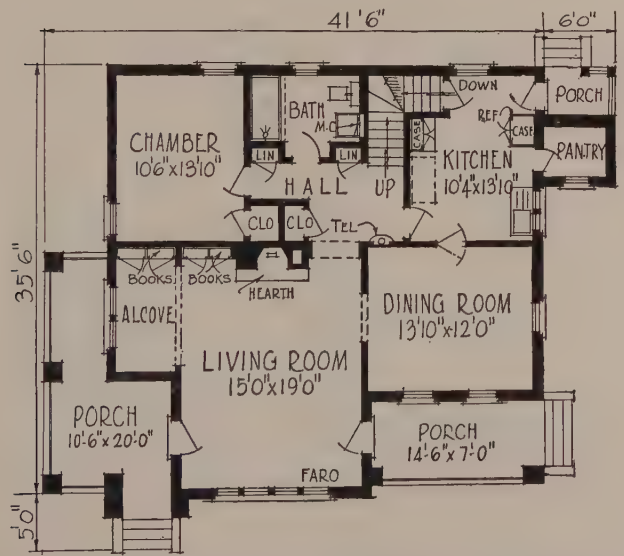
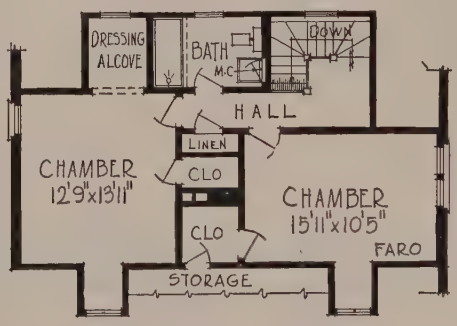
6 Rooms, 2 Baths, 2 Alcoves and Pantry

The FARO

HERE is a very attractive home built of structural clay tile. Notice the two large porches. Living room is large with alcove, fireplace and built-in book cabinets. There is a large sleeping room downstairs, a hallway with built-in phone cabinet and linen cabinets, model bathroom, efficiency kitchen with built-in utility cases and pantry. Upstairs two large chambers, one has dressing alcove. There is a modern bathroom.





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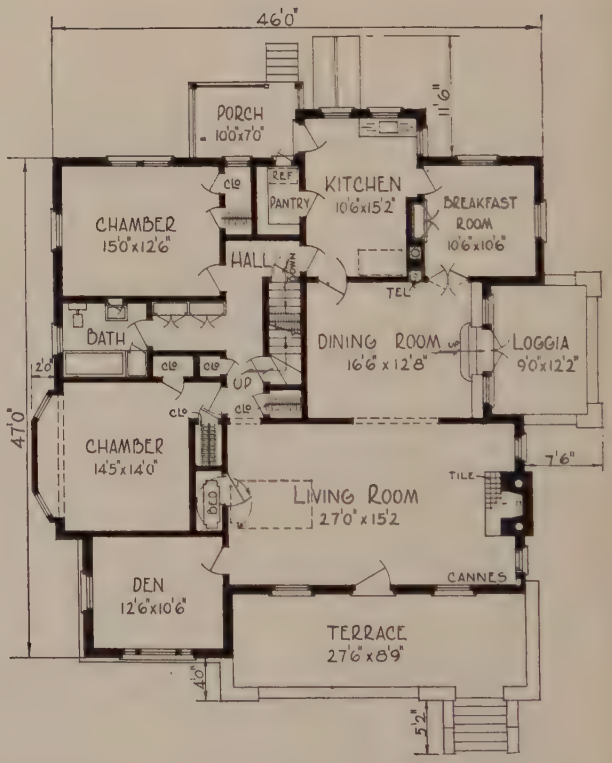
5 Rooms, Bath, Den and Breakfast Room

The CANNES

THE exterior walls of this attractive bungalow are of structural clay tile, with basement and terrace walls of stone. This, together with the tile roof, forms a pleasing and harmonious ensemble. The well planned interior offers such modern conveniences as disappearing bed, space-saving closets, built-in kitchen details, a breakfast room, phone cabinet, etc. Note size of rooms.

View In Breakfast Room



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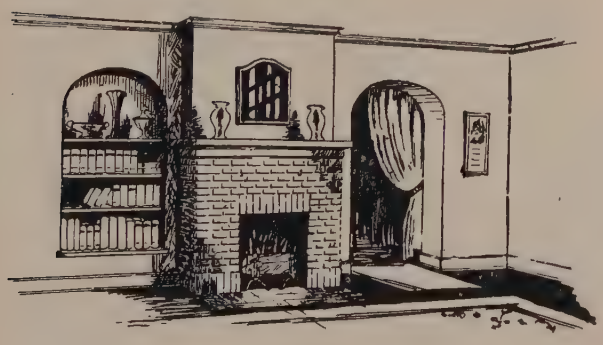
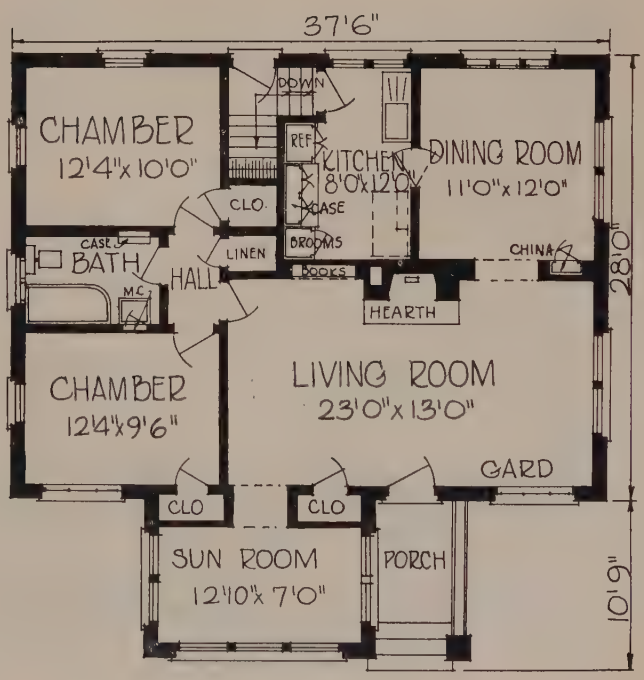
5 Rooms, Bath and Sun Room

The GARD

THIS solid looking little home is built of structural clay tile and offers much in comfort. Note the large living room, the fireplace, the big sun room, the kitchen with its many built-in features, the large chambers, the dining room with china closet, the linen and clothes closets, the model bathroom with built-in cabinet.



View of fireplace in living room



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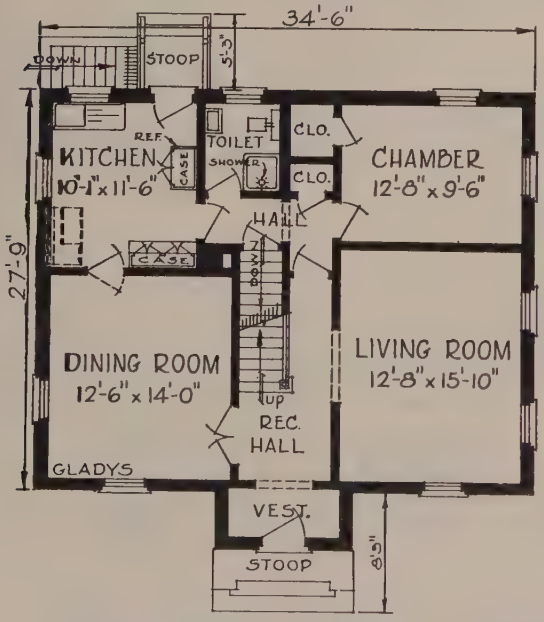
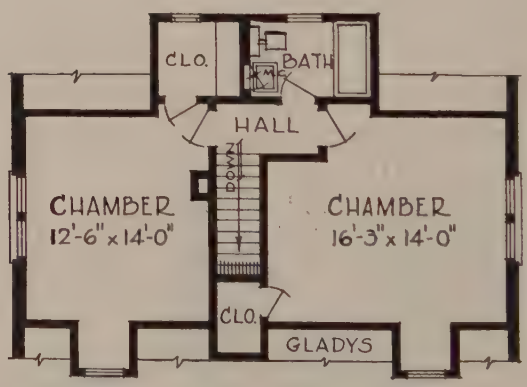
6 Rooms, Bath and Toilet

The GLADYS

THIS home with its charming but simple lines, and attractive dormers is built of structural clay tile. Living room and dining room are to the front and there is an efficiency kitchen with built-in cabinets, a toilet and shower off the downstairs hall, a comfortable bedroom and numerous clothes closets. Second floor shows two chambers.





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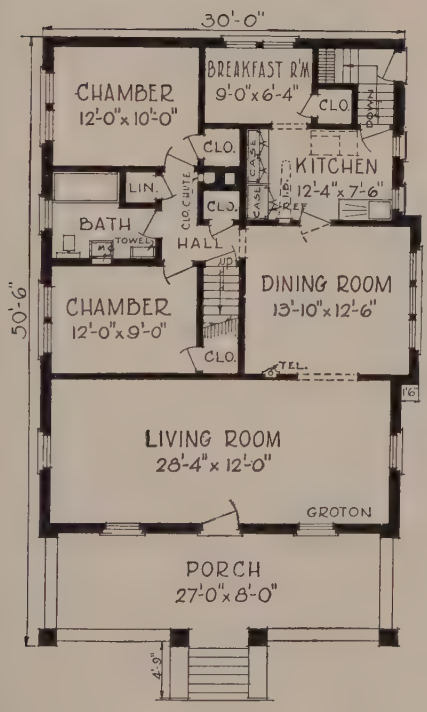
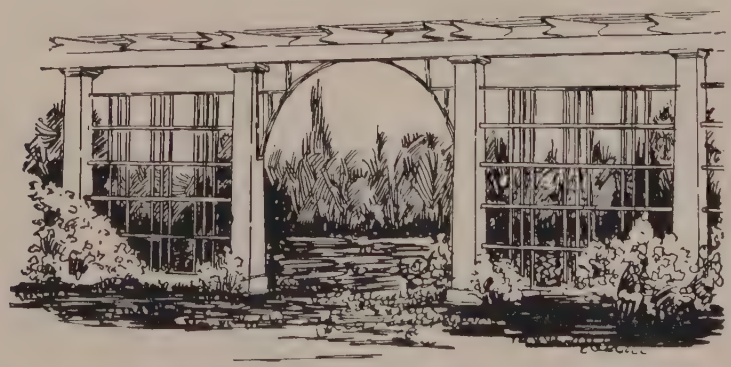
5 Rooms, Bath and Breakfast Room

The GROTON

BUILT of structural clay tile, with large open porch, and attractive dormer, this home presents a very pleasing appearance. Living room is large, extending across entire width of house. Dining room has built-in phone cabinet. The breakfast room has a large closet. There is a clothes chute built into the hall, a model bathroom with towel cabinet and two large chambers each with its own clothes closet. The spacious dining room is separated from living room by large plastered archway.





Trellises improve the grounds

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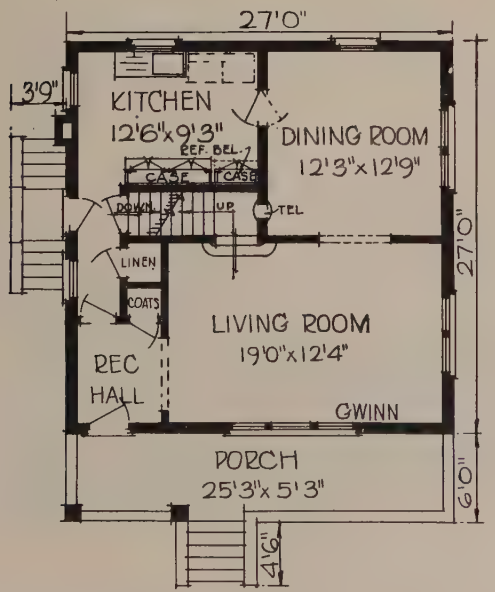
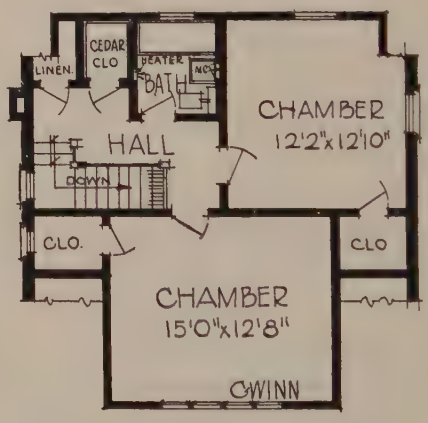
5 Rooms and Bath

The GWINN

THIS attractive home is built of structural clay tile. There is a side entrance into kitchen. Living room is large. Kitchen has built-in cases and there is a telephone cabinet in the wall between dining room and stairway. Upstairs are two chambers, a model bathroom with wall heater, a large cedar closet, linen closet and ample clothes closets.





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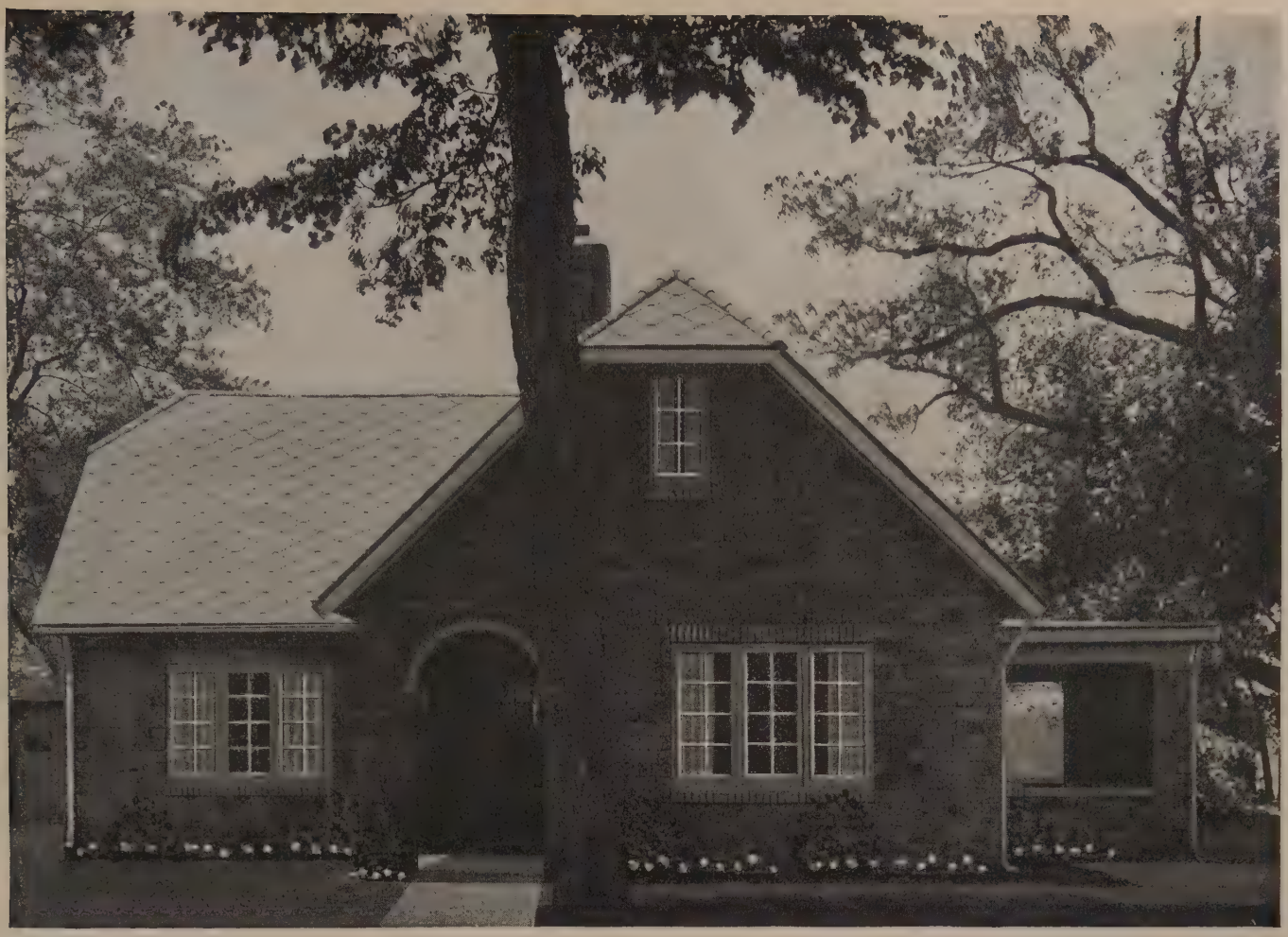
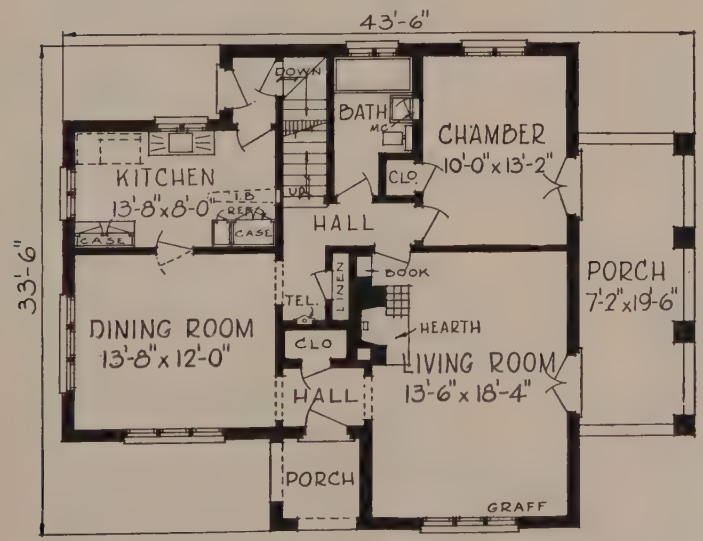
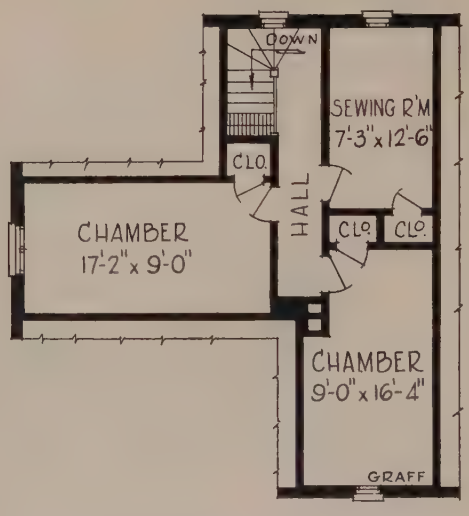


6 Rooms, Bath and Sewing Room

The GRAFF

STRUCTURAL clay tile forms the attractive exterior of this home. There is a large open porch entered from either the living room or first floor chamber. The large living room is provided with a cheerful fireplace. Note the large linen closet, built-in phone cabinet, and efficiency kitchen on first floor. Upstairs there are two chambers, a comfortable sewing room and three clothes closets. The bathroom is on the first floor.





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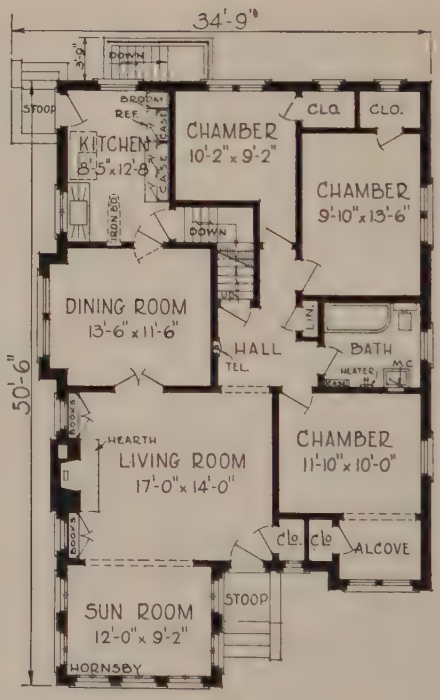
6 Rooms, Bath and Sun Room

The HORNSBY

In this home structural clay tile is used to advantage for exterior walls. There is a splendid arrangement of rooms with sun room and living room separated by archway. There are built-in book cabinets and fireplace in living room, ironing board, broom cabinets and utility cabinets in kitchen. Bathroom has wall heater and cabinet. There are three chambers, a phone cabinet in hall, a large alcove off front bed room and numerous closets. Construction costs are moderate.

Fireplaces are always appreciated



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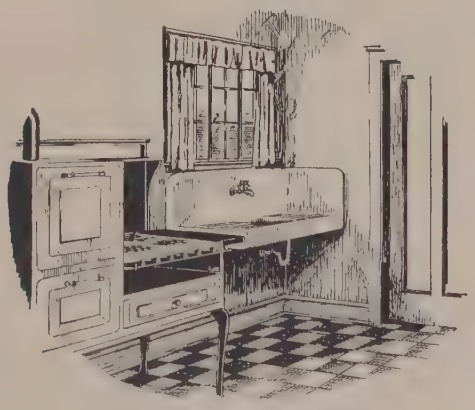
5 Rooms, Bath, Dining Alcove and Sun Parlor

The GREENWICH

THE EXTERIOR walls of this pleasing bungalow are built of stucco on structural clay tile. The massive stone chimney is effective. The unique treatment of the entrance and the gable over the sun room is at once appreciated. Note the splendid layout of rooms. Living room is large, with fireplace and book shelves, and adjoins the sun room. Kitchen has dining alcove, built-in cabinets, etc. There is a model bathroom, linen and clothes closets and a large closet in the vestibule.



A corner of the model kitchen

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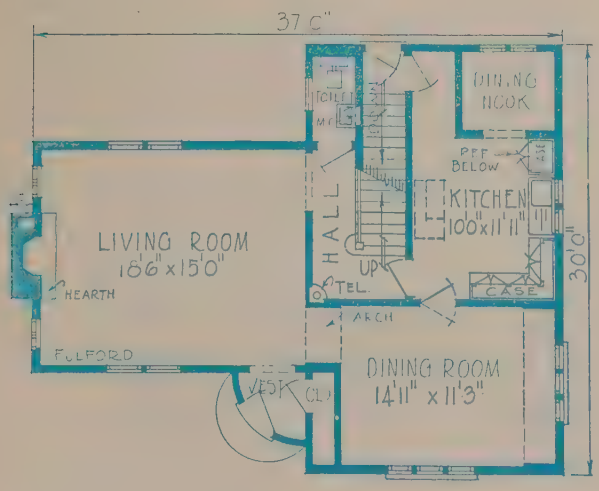
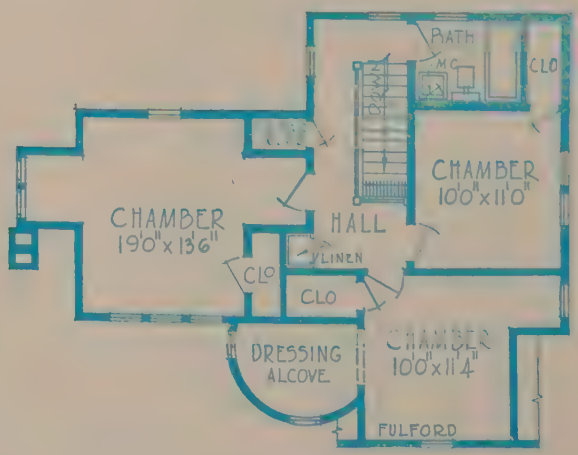
6 Rooms, Bath, Toilet and Dining Nook

The FULFORD

THIS HOME expresses the good taste and individuality of its owner. The unconventional lines of the shingled roof are further stressed by the dormer and conical tower inset for the entrance. These attractive, odd looking walls are built of stucco on metal lath resting on a base of brick which is also used for the chimney. The interior includes a natural fire place, built-in telephone cabinet, built-in kitchen cabinets, a cedar closet, and a dressing alcove for one of the front bedrooms. A convenient toilet is on first floor.





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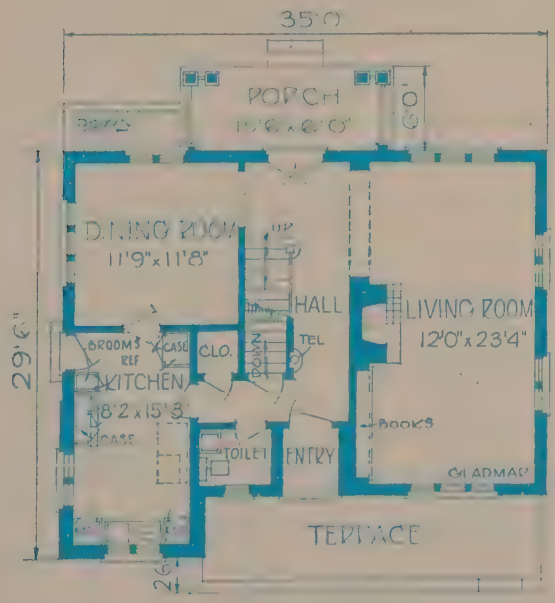
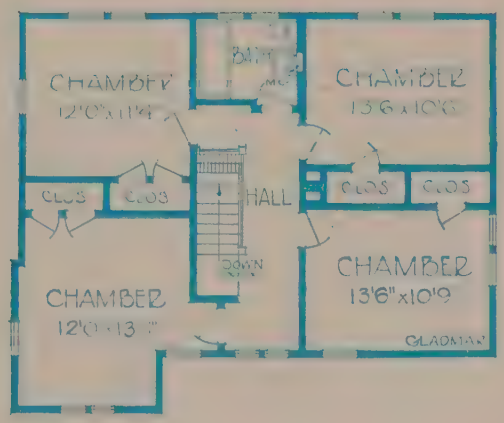
7 Rooms, Bath and Toilet

The GLADMAR

STONE is employed here for the terrace wall and a portion of the house wall. The balance of the exterior is in stucco with half timbered effect. The roof is shingled in several colors. This inviting home has a well arranged interior including a living room with fireplace and built-in bookshelves, and has many desirable cabinets built into the kitchen. An extra toilet and a built-in telephone cabinet are welcome additions on first floor.





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6 Rooms, Bath, Toilet, Sun Room and Dining Alcove

The GLOWMAR

WALLS and lower part of chimney are built of stucco on cinder block. The roof of shingles of mixed color, and the upper part of the chimney of variegated brick. The living room is equipped with a natural fireplace and built-in bookshelves. Cabinets are built into the kitchen and in the wall opposite the dining nook. A telephone cabinet built into the hall, disappearing stairs, built-in window seat and linen closets on the second floor, and a fireplace in one of the bedrooms are among the many conveniences of this home.

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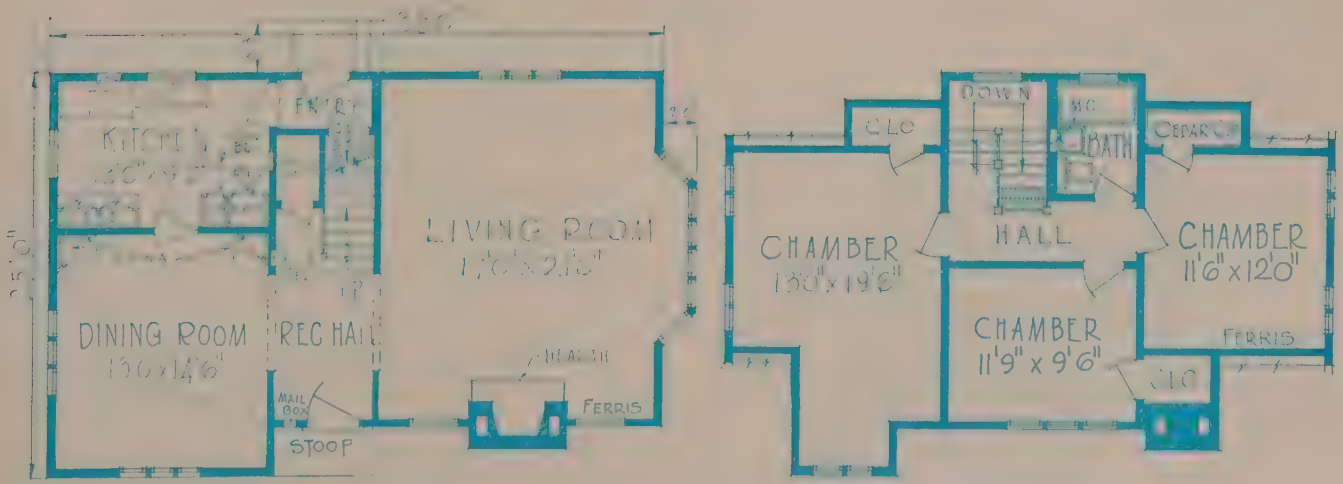
The FERRIS

6 Rooms and Bath

HERE is a home of stucco on metal lath base that appeals through the excellence of design and the careful combining with brick and stone. There is an impressive chimney, with stone trim, and a similar treatment is accorded the inviting entrance. There is a well planned interior. Note the large living room with bay and fireplace; the reception hall with built-in mail box; the efficiency kitchen with built-in cases, ironing board cabinet, etc.; and the built-in corner cabinets in dining room. Upstairs there are three large chambers, arranged for comfort and convenience.



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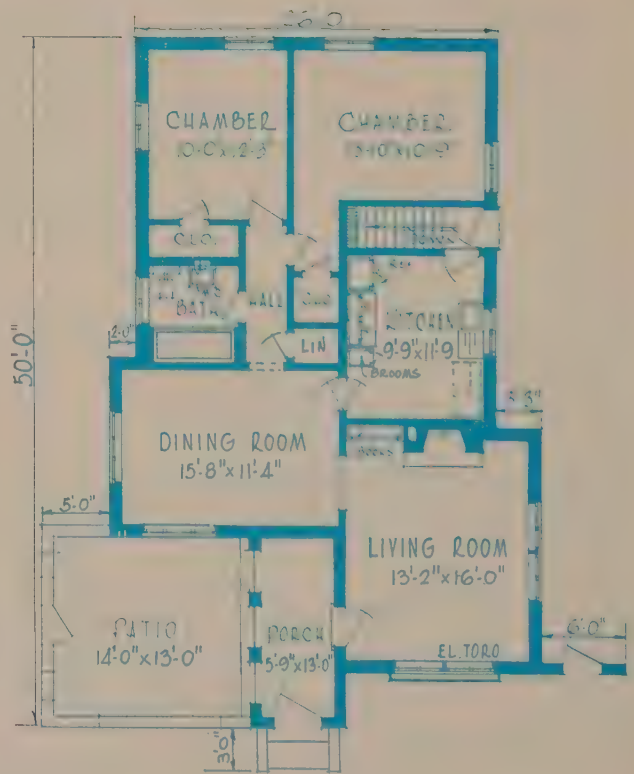
5 Rooms and Bath

The EL TORO

STUCCO on structural clay tile is used for the exterior of this attractive Spanish home, and there is a roof of colorful clay tile. Notice the grilled rail at windows of living room and the little balcony at small window just above. An attractive gate enters the porch and to the left is a large patio. Living room shows a fireplace and built-in book shelves. Kitchen has built-in utility cabinets and broom cabinets. The chambers are well placed.

A fireplace and book niche



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6 Rooms, 2 Baths, Sleeping Porch and Dining Nook

The HOWARD

BRICK is used to decorate these walls of stucco on cinder blocks. The low gables are covered with asbestos shingles. A commodious interior includes built-in living room bookshelves, massive fireplace, telephone cabinet in the dining room, and many built-in kitchen conveniences including an incinerator for garbage disposal. A mail box is built into the entrance. Space saving closet fixtures are used.

A corner of the attractive living room.

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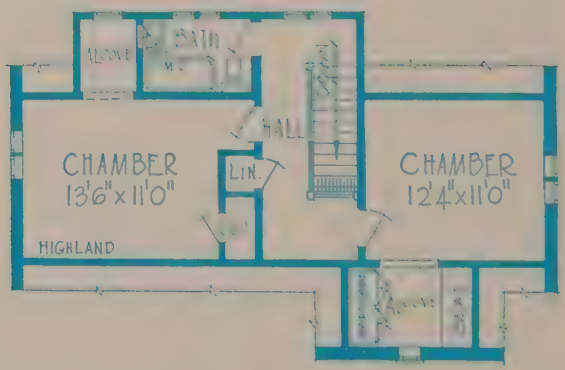
5 Rooms, Bath, Toilet, Den and Alcove

The HIGHLAND

A RATHER unusual combination of stucco finish on cinder block with brick laid herring-bone fashion for entrance and chimney cap. Note the attractive stone inlays of lower and central stucco portions of chimney. There is also a pleasing use of rustic siding on the gables. Inside we find a large living room with a fireplace occupying one entire end, an adjoining den with toilet and bed closet, and an efficiency kitchen with built-in dining set and other features. Upstairs there are two large chambers with alcoves and a bath.



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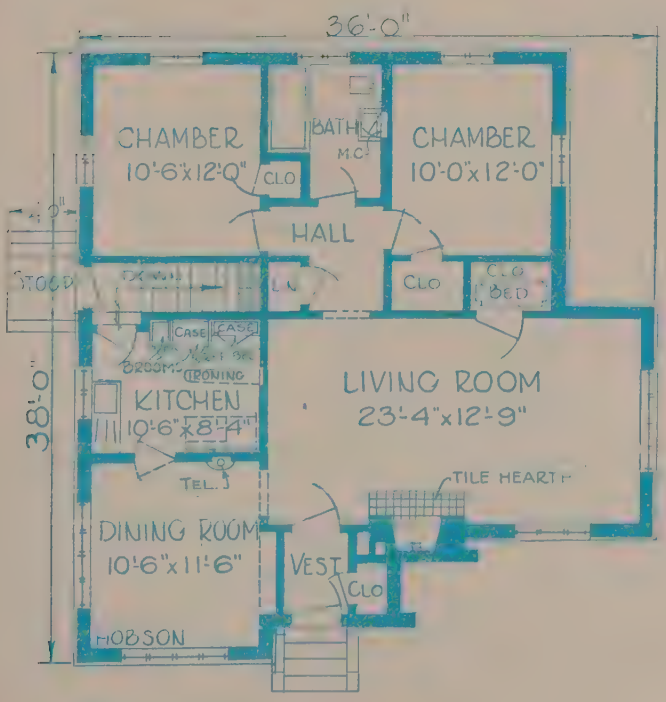
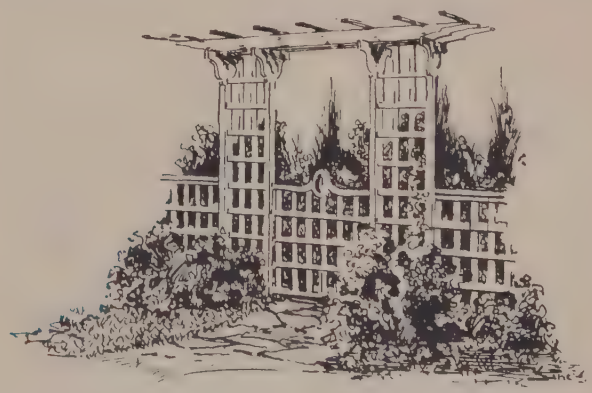
5 Rooms and Bath

The HOBSON



AN UNUSUAL combination of structural clay tile and brick walls with stone and half-timbered effects. The blue slate roof is appropriate in color and texture. The chimney is effective. A living room fireplace, built-in telephone cabinet, built-in kitchen units, and a closet designed to hold a disappearing bed are included in the well planned interior.



A trellised gate that will improve the appearance of your yard.

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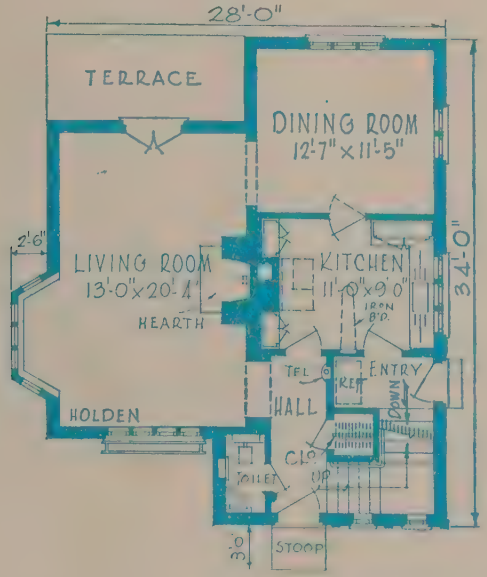
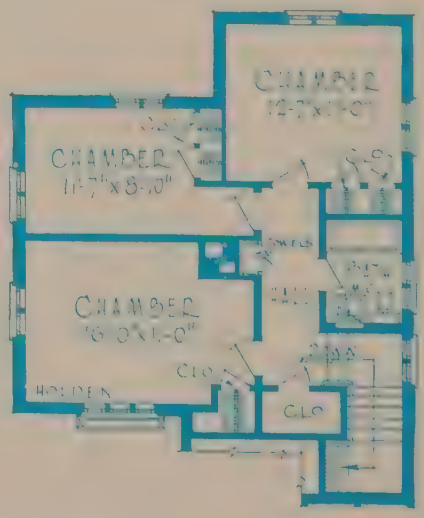
6 Rooms, Bath and Toilet

The HOLDEN

WALLS are built of stucco on structural clay tile, brick and half timbers. The thatched roof helps carry out the informal style of the general design. Windows are attractively grouped and admit an abundance of light to the well planned interior. A natural fireplace in the living room, built-in kitchen conveniences, telephone cabinet and an extra toilet are among the many desirable features. Space saving closets are used throughout.





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6 Rooms, Bath, Toilet and Sewing Room

The GRINNELL

THE WALLS of this typical French home are built of stucco on metal lath. The roof is of wood shingles. The brick entrance and the French window above are very effective. The living room with its natural fireplace, the library with built-in window seat and bookshelves, the built-in china cabinets in the dining room, the telephone cabinet and the built-in kitchen conveniences are among the many desirable features of this home. An extra toilet is located just off the vestibule. The sewing room is convenient.

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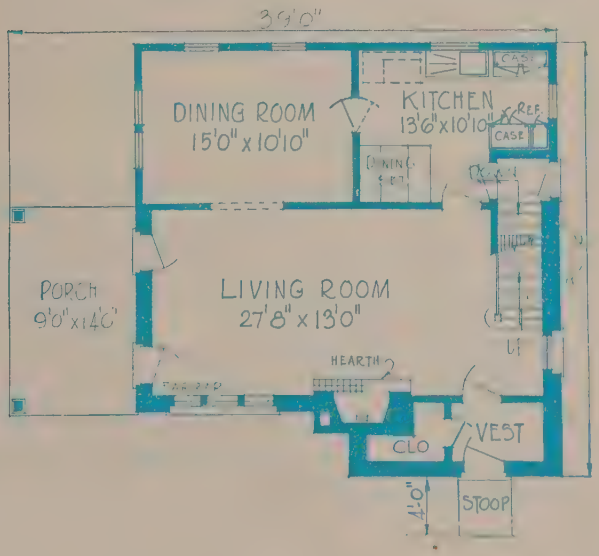
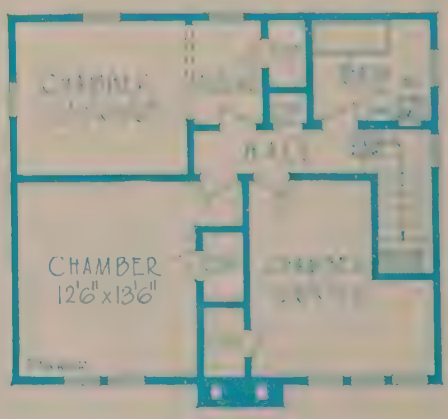
6 Rooms and Bath

The FARRAR

STUCCO on metal lath has been used on the walls of this home in combination with brick. The imposing chimney and charming entrance are also built of brick. The living room has a natural fireplace. A dining set and cabinets are built in the kitchen. Upstairs the rooms are well arranged, and there are three chambers one with alcove. There is a bath and plenty of closet space. Note the large open porch off living room.





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5 Rooms, Bath, Sun Room and Nook

The HAMMETT

A WELL planned home built of stucco on metal lath, with brick foundations and chimney, and shingled roof. The pyramid roof line is emphasized by the gabled dormers. Color scheme in white and green is excellent. The living room with fireplace and bay windows is bright and cheerful. Telephone and china cabinets are built into the dining room. The kitchen is equipped with cabinets and the bath contains a built-in case.

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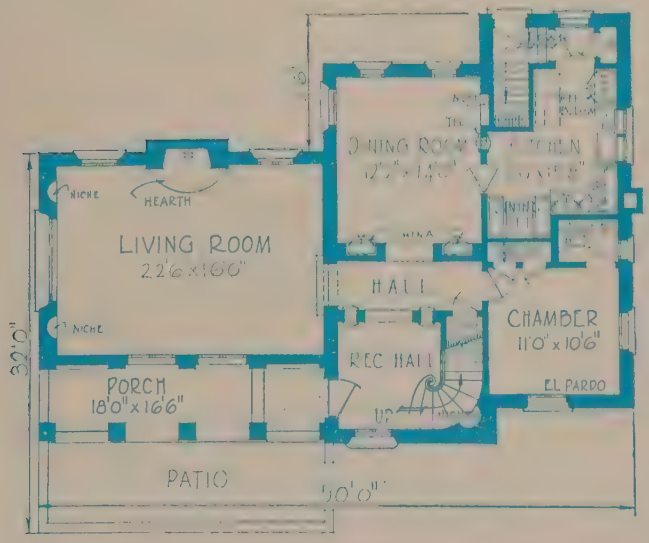
7 Rooms, Bath and Toilet

The EL PARDO

STRONGLY suggestive of Spain, the Mediterranean and our own Southwest, this home of structural clay tile has many things to recommend it to the home builder. The Patio gives privacy to the immediate front lawn, and extra convenience and comfort are afforded by the bedroom balconies. Modern up to the minute conveniences such as built-in kitchen units, china and telephone cabinets, are part of this well planned home.



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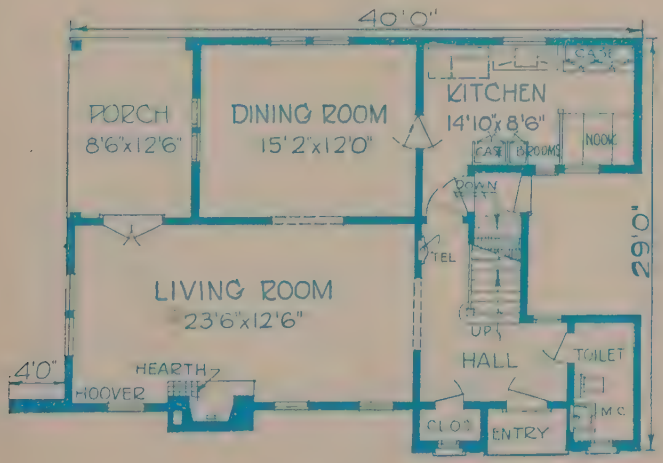
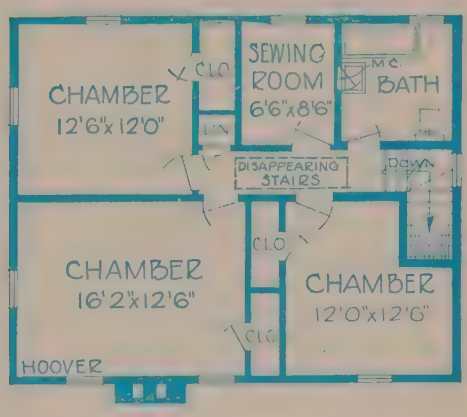
6 Rooms, Bath, Toilet and Sewing Room

The HOOVER

THIS is an exceptionally attractive home with a stucco exterior on metal lath. There are graceful roof lines and an imposing chimney. An inviting entrance and flagstone walk. All windows are shuttered. The interior is particularly well planned, with large living room, model kitchen and toilet on first floor. Upstairs there are three large chambers, a sewing room and bath. There is a disappearing stairway to attic. Plenty of closets are provided. Various built-in features assure unusual comfort and convenience.





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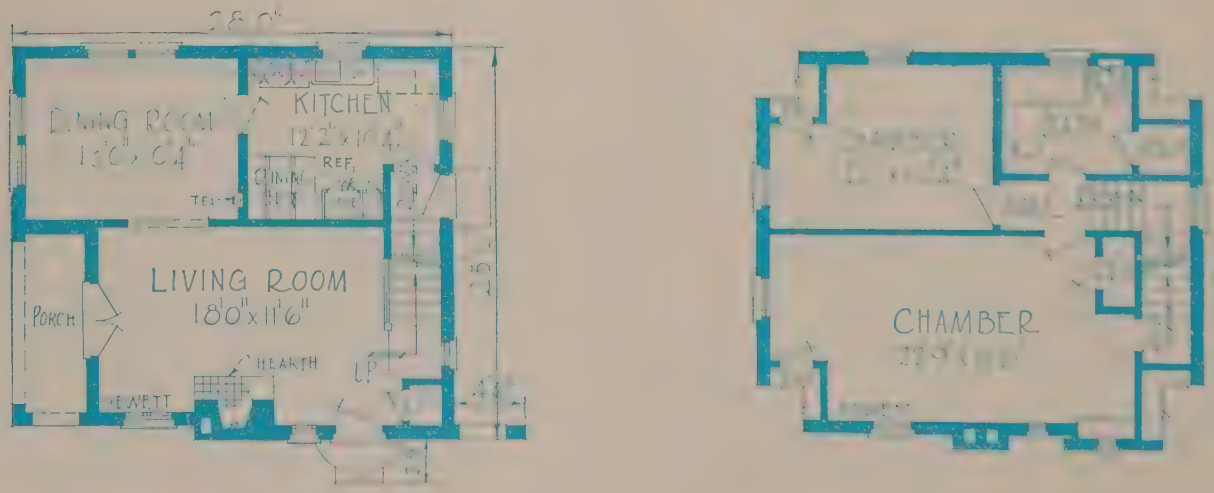
5 Rooms and Bath

The HEWITT

A GRACEFUL house with the shingled roof color repeated in the trim at windows and entrance. The colored textured wall is achieved by the use of stucco on metal lath. Two entrances, one at the front and the other at the side, open into a good sized living room with fireplace. A telephone cabinet is built into the dining room. A dining set and cabinets are built into the convenient and well arranged kitchen. The cost is moderate.



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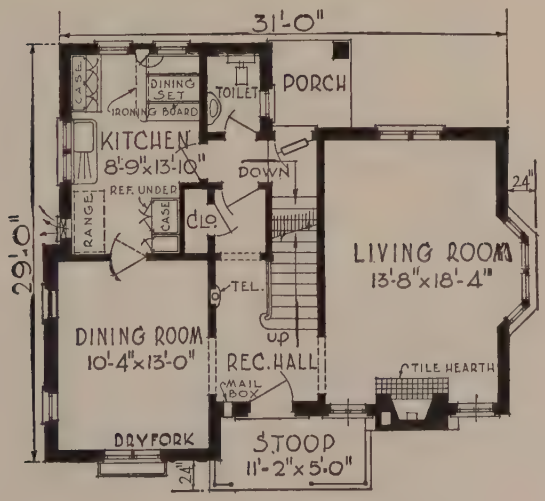
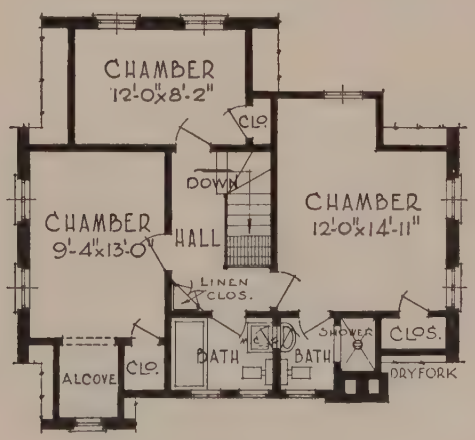
6 Rooms, 2 Baths, Toilet and Alcove

The DRYFORK

THE combination of face brick, stucco (on structural clay tile) and half-timbering gives this home a striking and unusually distinctive appearance. Such features as a model kitchen, built-in dining set, mail box, telephone cabinet and delivery receptacle help to make a complete and convenient interior. Rooms are comfortably arranged.





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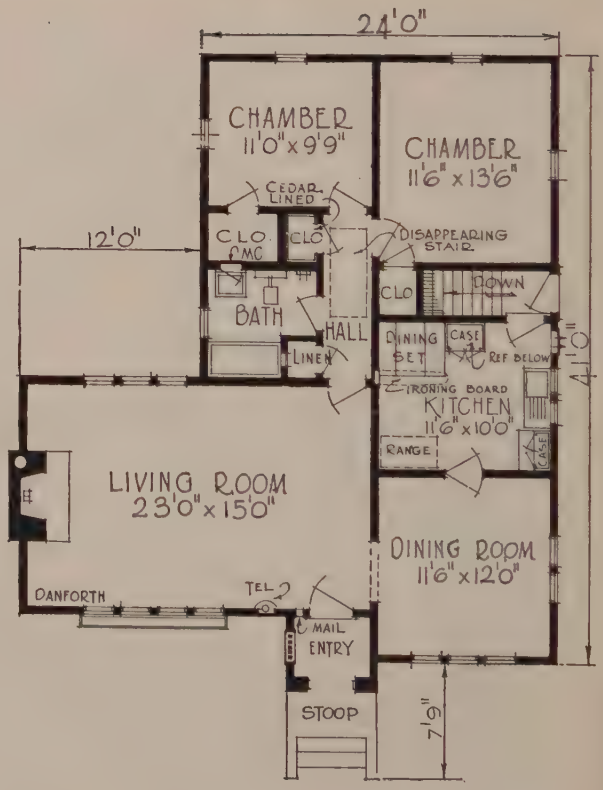
5 Rooms and Bath

The DANFORTH

STUCCO, on patent insulated base, forms the exterior of this attractive bungalow home that will truly mellow with age. It is well planned inside, quite different from the ordinary bungalow layout. Many convenient built-in features are used. A disappearing stairway leads to the attic.

Elevation of Fireplace



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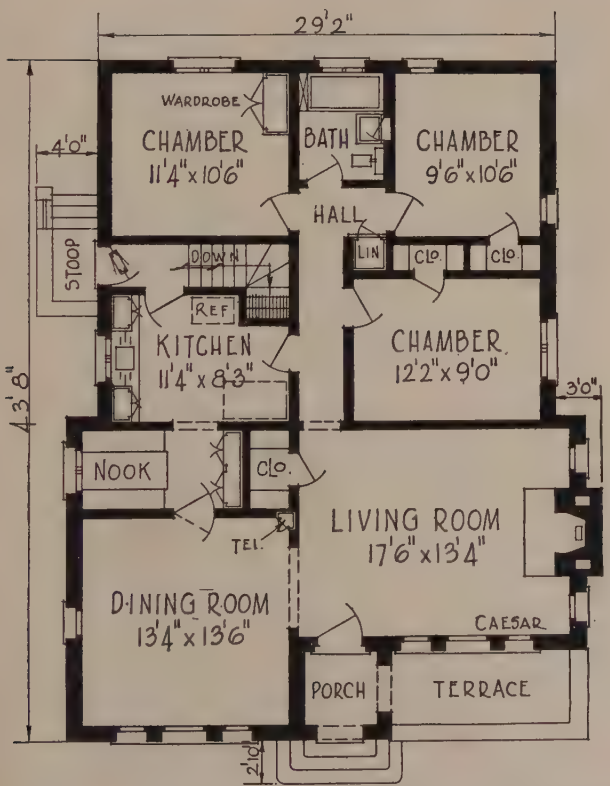
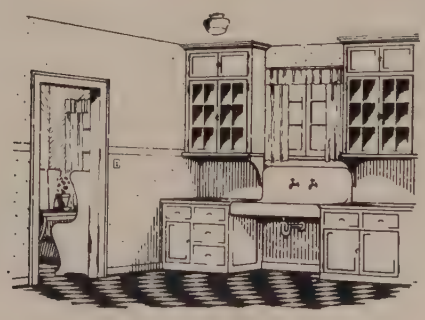
6 Rooms, Bath and Dining Room



The CAESAR

STUCCO on cinder concrete block forms the exterior of this attractive Spanish bungalow that is built for permanence as well as beauty. The interior is unusually well arranged and is replete with many built-in conveniences. There is a side entrance to kitchen, a large living room, and a dining room at the front of the house.



View of Kitchen and Dining Nook

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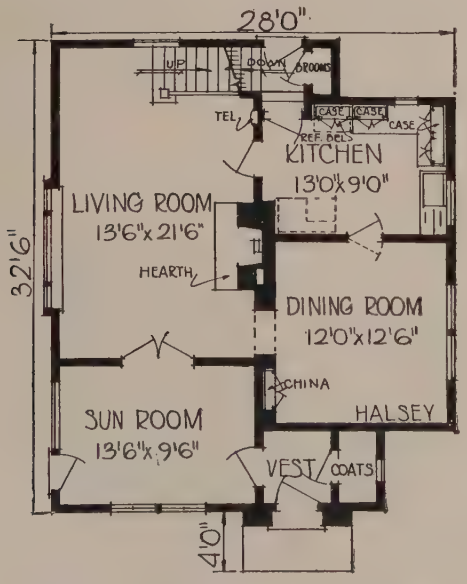
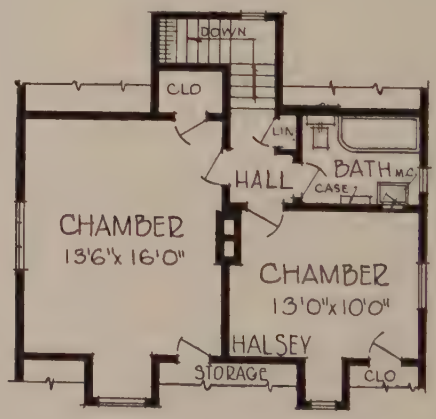
5 Rooms, Bath and Sun Room

The HALSEY

THE exterior of this attractive home is built of stucco on metal lath. There is an attractive entrance of stone and windows are well grouped. Inside is large living room with fireplace and an adjoining sun room. Dining room has built-in china cabinet and the kitchen is equipped with built-in cabinets. Upstairs are two chambers, a large storage space, a model bathroom with built-in case, a linen closet, and clothes closets.





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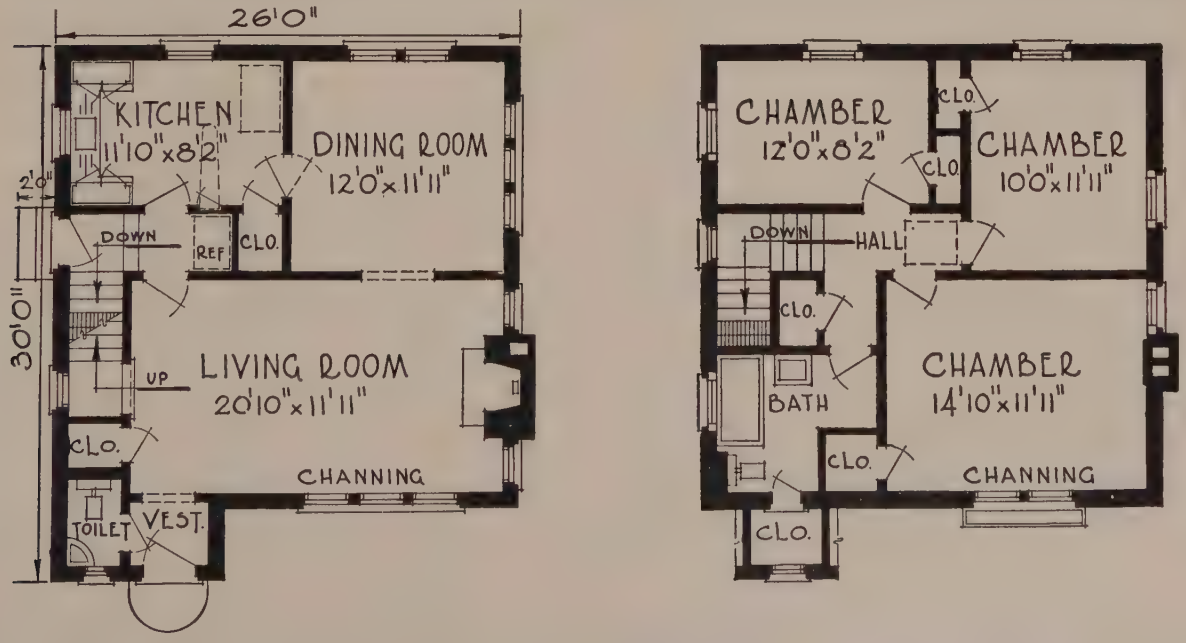
6 Rooms, Bath and Toilet

The CHANNING

STUCCO on cinder block forms the side walls of this attractive home that offers much internal comfort and convenience as well as exterior beauty. Built-in kitchen conveniences and a first floor toilet are among the features. Rooms are large and well planned.



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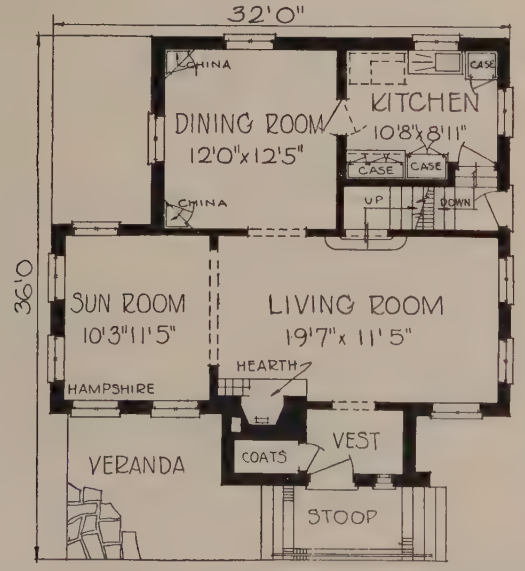
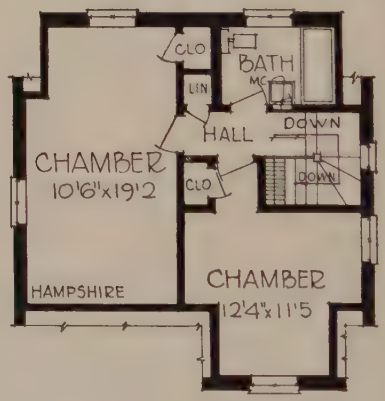
5 Rooms, Bath and Sun Room

The HAMPSHIRE

STUCCO on structural clay tile, with brick ornamentation, a variegated asbestos shingle roof, a railed stoop and an inviting entrance have much to do with the attractiveness of this home. Note the awninged veranda, the splendid interior arrangement and size of rooms that are exceedingly well planned. Living room has fireplace in one corner and a sun room adjoining. There is a large coat closet in vestibule and the kitchen has many built-in features. Built-in china closets are placed in corners of dining room.





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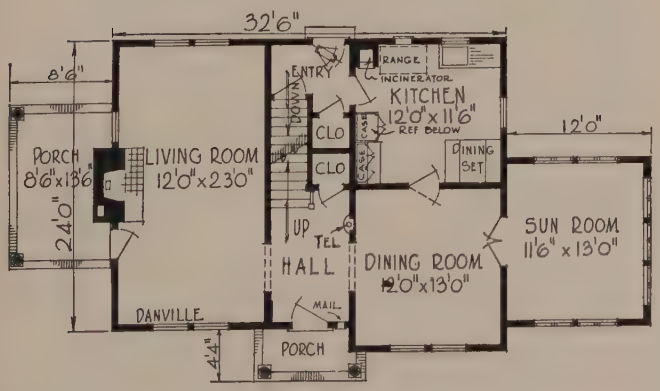
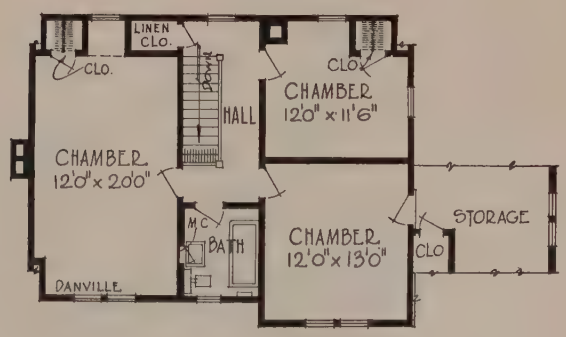
6 Rooms, Bath, Sun Room and Storage

The DANVILLE

A REAL beauty of textured stucco, with asphalt shingle roof. The two floors are very conveniently arranged. Note the large chamber on second floor, and the handy storage room. An incinerator, built-in dining set and delivery receptacle are among the many convenience features. There is a delightful sun room adjacent to dining room.





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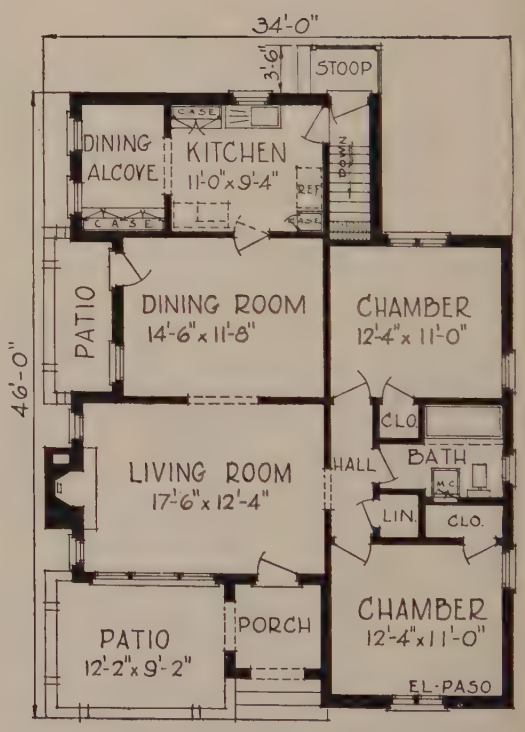
5 Rooms, Bath and Dining Alcove

The EL PASO

THE exterior walls of this attractive bungalow are built of stucco on structural clay tile. Note the patio, the porch with archways, the splendid living room with fireplace, the patio at side, the efficiency kitchen with dining alcove, the two large chambers with central bathroom. There is a linen closet and clothes closets and, even the dining alcove has a built-in cabinet. Nothing has been overlooked to make this home convenient and comfortable.

This garage matches the home as all garages should



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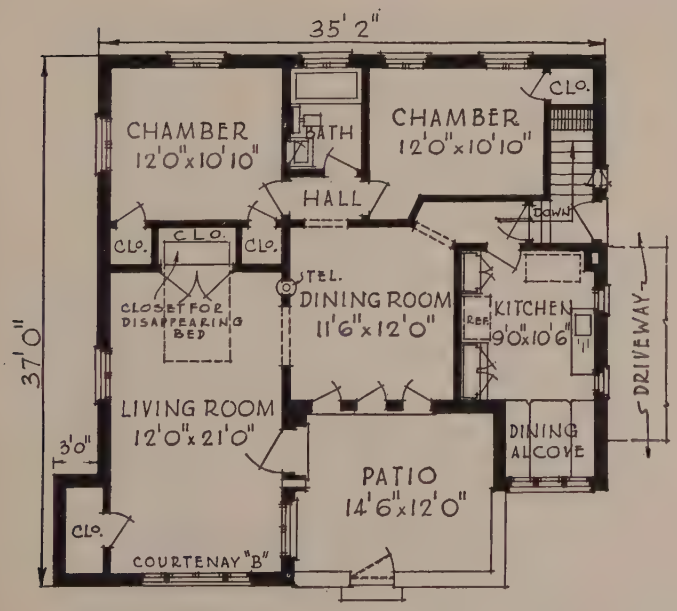
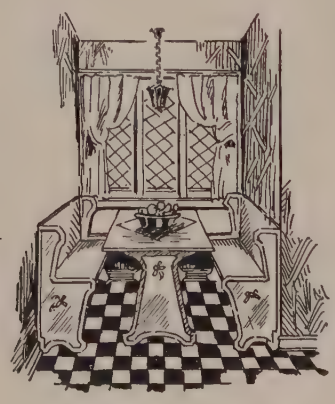
5 Rooms, Bath and Dining Alcove

The COURTENAY



AN UNUSUAL bungalow with an exterior of stucco on structural clay tile. Note the splendid grouping of windows, the gated patio, the arched port cochere, and the little touches here and there that lift it far above the ordinary. A disappearing bed is among the many conveniences in the well planned interior.



A Convenient Breakfast Nook

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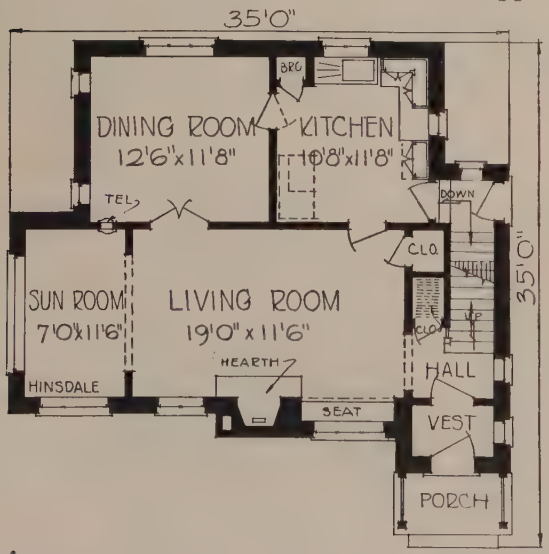
6 Rooms, Bath and Sun Room

The HINSDALE

THIIS attractive home with its dormers and gables is created by the use of stucco on structural clay tile. There is an imposing chimney, a porch and inviting entrance. Just off the living room is a comfortable sun room. Living room has fireplace and built-in seat and kitchen is fully equipped. A telephone cabinet is available from either the dining or sun room. Upstairs are three large chambers, a model bathroom with towel cabinet, numerous clothes closets and a disappearing stairway.



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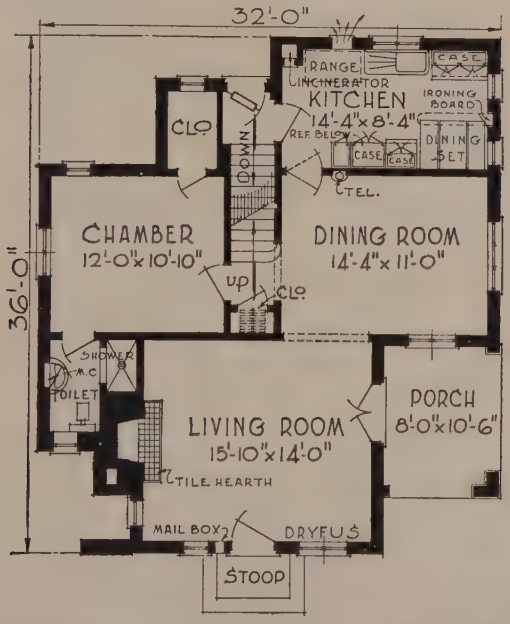
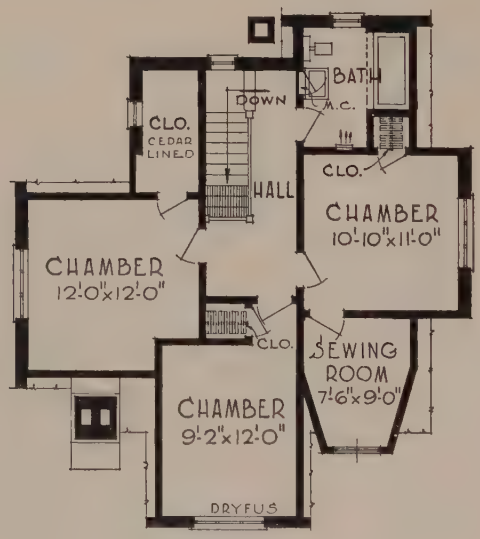
7 Rooms, Bath, Toilet and Sewing Room

The DRYFUS

UNIQUE, and full of character in every detail, this home immediately attracts attention. It is of stucco construction on cinder concrete block. There are four large sleeping rooms and a sewing room. A large living room, porch and many built-in features.





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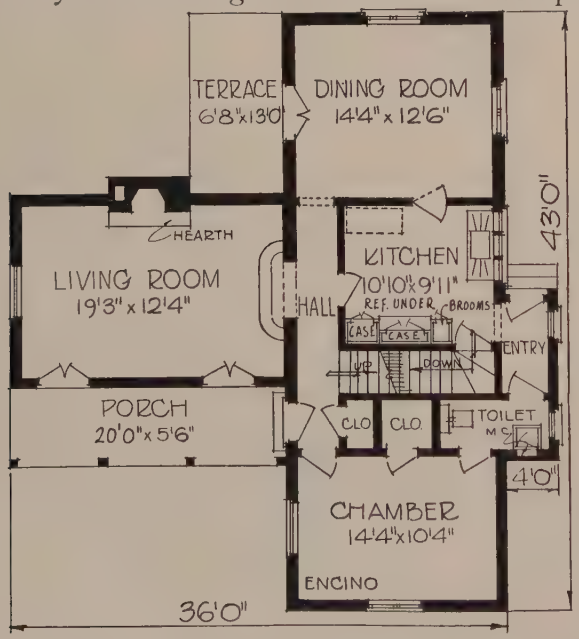
6 Rooms, Bath and Toilet

The ENCINO

STUCCO on structural clay tile and a clay tile roof add much to the exterior appearance of this home with its inviting porch, its splendid arrangement of windows, and attractive balcony. The arrangement of rooms is well planned and merits careful consideration.



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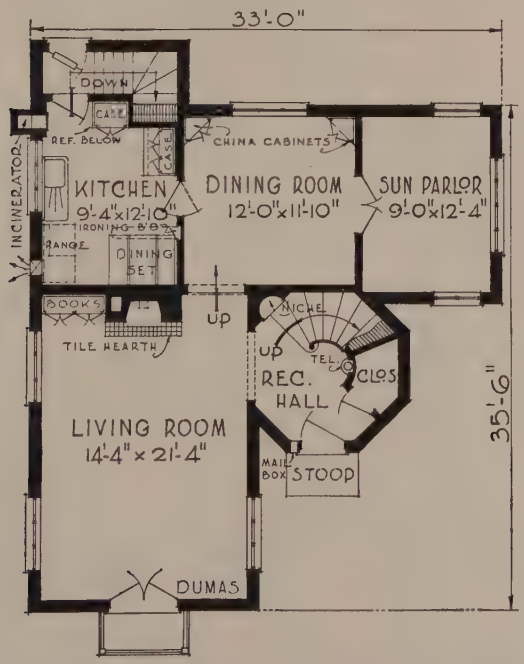
6 Rooms, 2 Baths and Sun Parlor

The DUMAS

THIS attractive home is built of stucco on structural clay tile. Asbestos shingles are used for roof and an incinerator is shown in the plan, and many other features.



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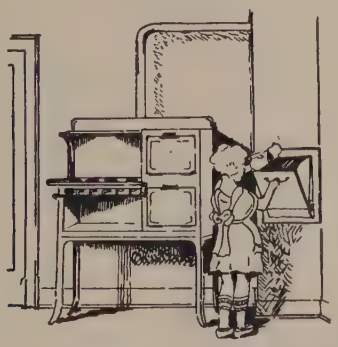
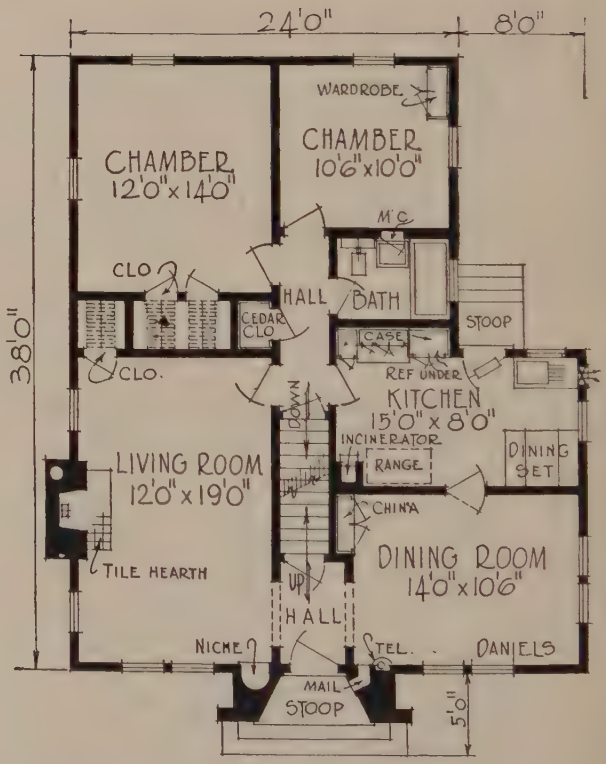
5 Rooms and Bath

The DANIELS

NOTHING has been overlooked in this complete little bungalow home of stucco with asphalt shingle roof. A modern efficiency kitchen, cedar-lined closet, adjustable closet fixtures, built-in dining set and phone cabinet. Even a delivery receptacle in the back door means more convenience.



Showing Incinerator In Kitchen



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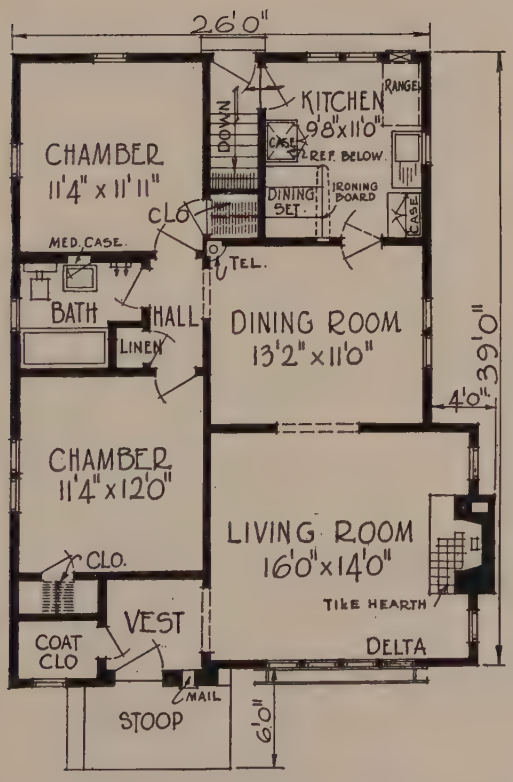
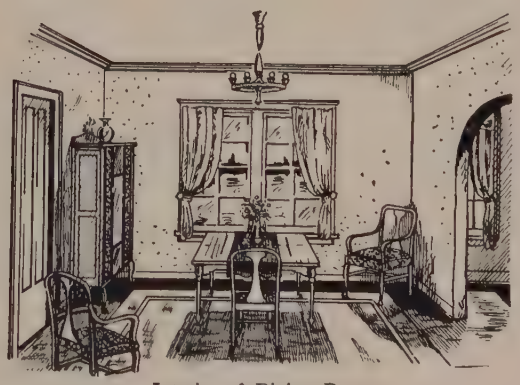
5 Rooms and Bath



The DELTA

An asbestos roof tops this charming bungalow of stucco. The well arranged interior includes a model kitchen, built-in telephone cabinet, breakfast nook and mail box, space-saving closets, ironing board cabinet, etc.



Interior of Dining Room

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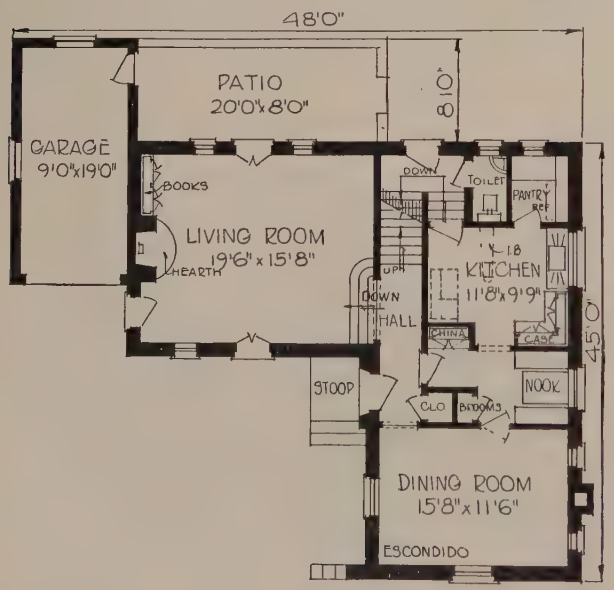
6 Rooms, Bath, Toilet, Nook, and Garage

The ESCONDIDO

THIS attractive exterior is constructed of stucco on structural clay tile. Note the large balcony at second floor, the garage and tile roof. Inside is large living room with fireplace and built-in book cabinet. In the kitchen there are many built-in features. There is a toilet on first floor. Upstairs are three chambers, bathroom and plenty of closets.



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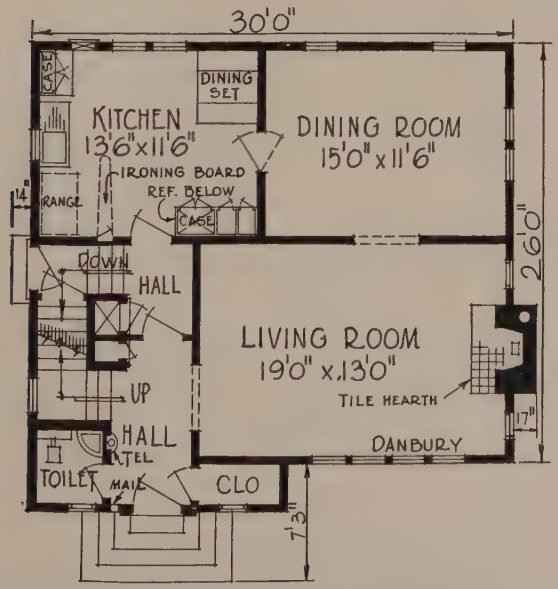
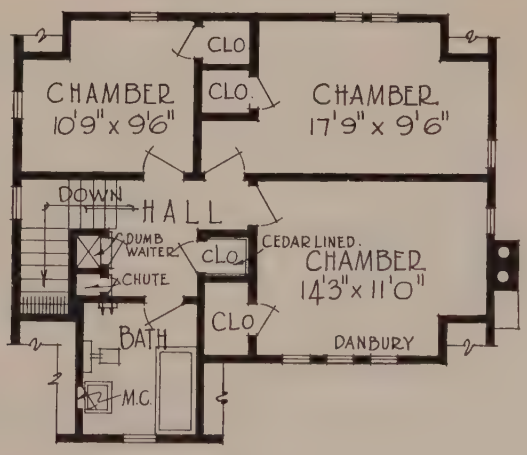
6 Rooms, Bath and Toilet

The DANBURY

THIS splendidly proportioned, well designed home of English type always attracts attention and favorable comment. The stucco exterior is ornamented with a brick decorated entrance and step. Roof is of asphalt shingles. Inside there is a model kitchen, built-in dining set, phone cabinet and mail box, a dumb waiter, clothes chute and cedar-lined closet. All rooms are large and well arranged, with toilet on first floor.





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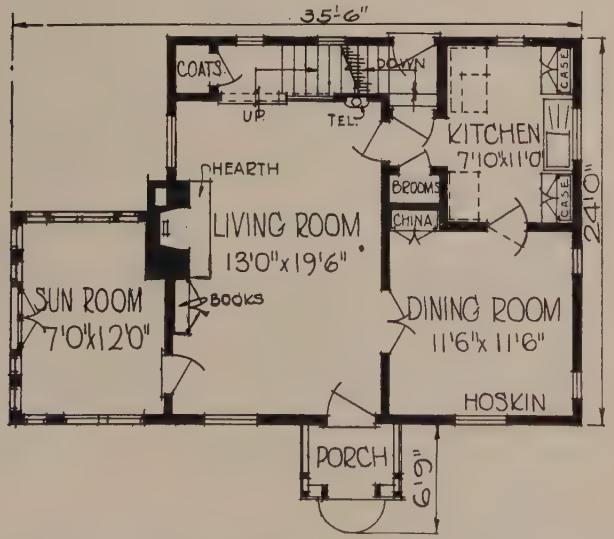
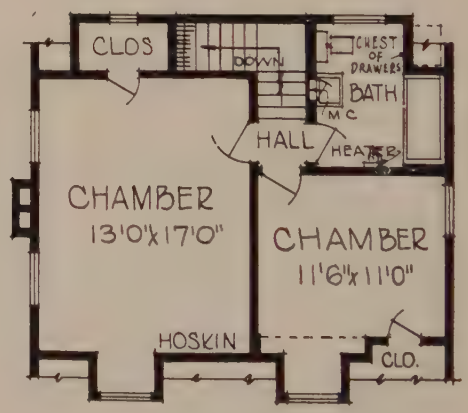
5 Rooms, Bath and Sun Room

The HOSKIN

STUCCO on metal lath are used for walls of this attractive exterior with its comfortable sun room and inviting entrance. Notice the brick treatment at entrance and sun room. Living room is large with fireplace and book cabinet. At one end there is a telephone nook. There is a model kitchen with built-in cabinets and large broom closet. Dining room has built-in china cabinet. Upstairs are a large and smaller chamber, a model bathroom with wall heater and built-in chest of drawers.





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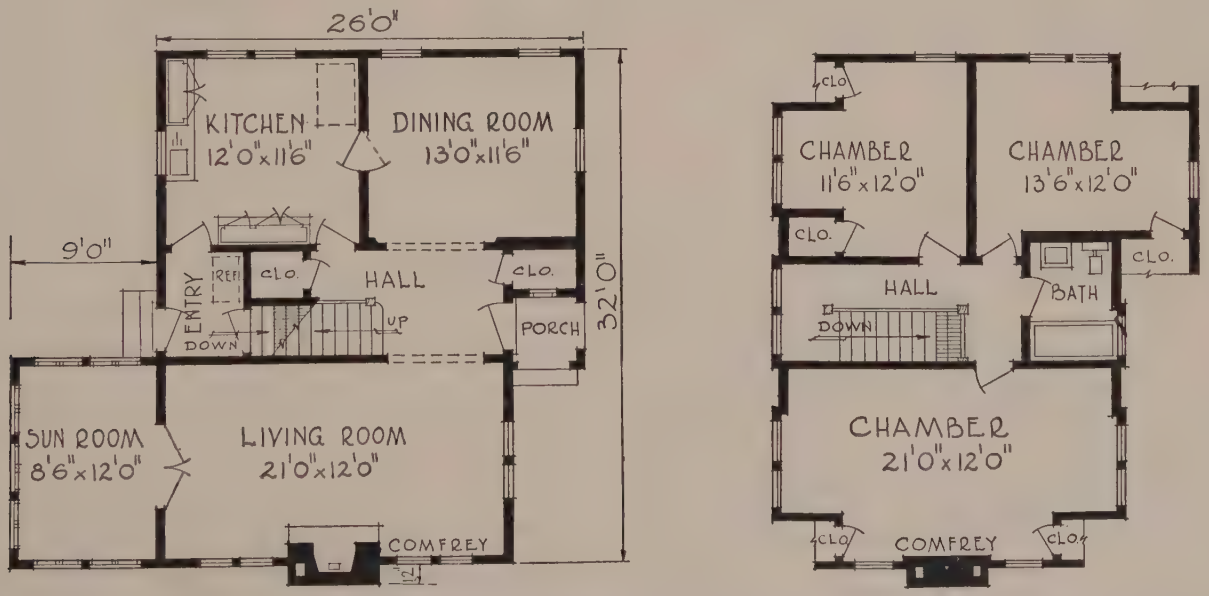
6 Rooms, Bath and Sun Parlor

The COMFREY

THIS attractive home, of old English type, with its imposing chimney, will look well on either a wide or average size lot. Outside walls are of frame construction, with stucco on metal lath. The interior is charmingly arranged with every thought for convenience and comfort. There is a cozy sun room separated from living room by French doors.



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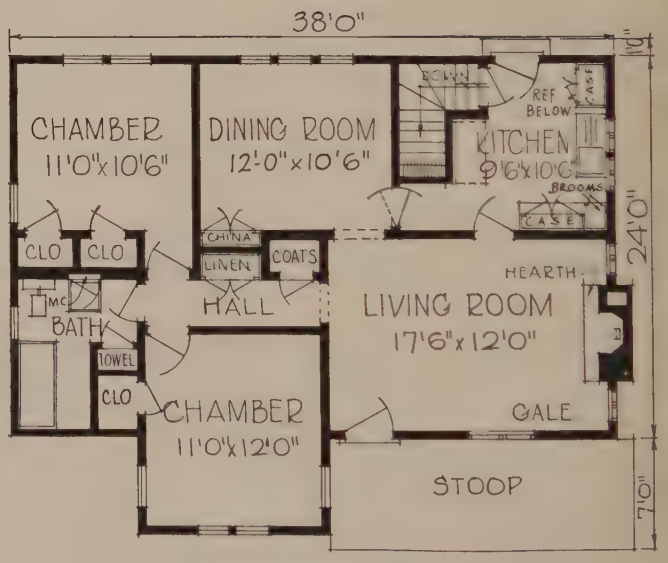
5 Rooms and Bath

The GALE

HERE is an attractive bungalow home in which stucco on metal lath is used for the exterior. Note the ornamental windows, the massive chimney, the pleasing roof lines. Living room has fireplace. There is an efficiency kitchen with built-in conveniences, model bath, built-in cabinet in dining room, numerous clothes closet and linen closet.



An ornamental fence and gate improves the yard.

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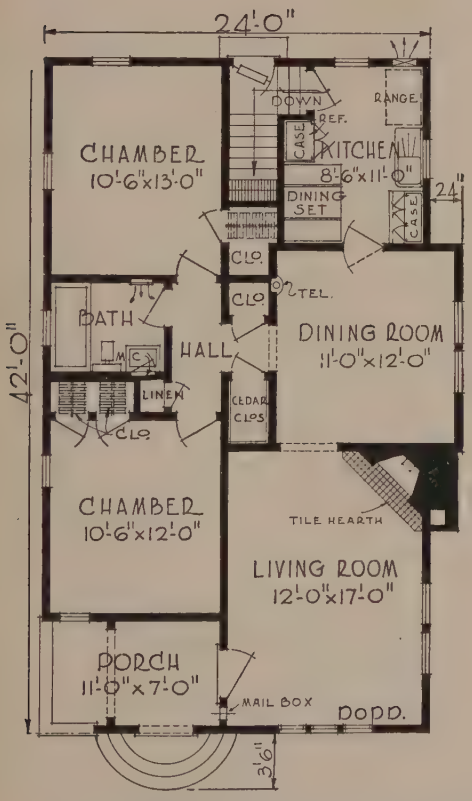
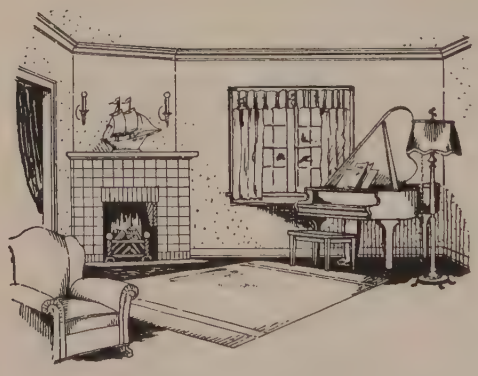
5 Rooms and Bath

The DODD

THIS artistic bungalow is built of stucco, on a combination base. An artistic chimney and brilliantly colored tile roof set the house off to perfection. The well arranged interior has everything for comfortable convenience.





Interior of Living Room

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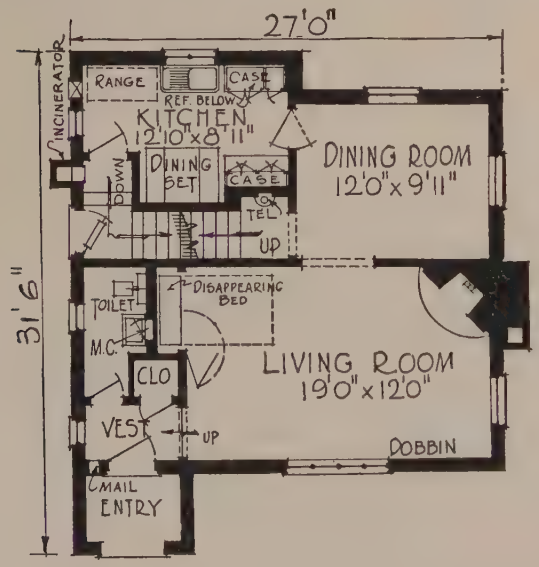
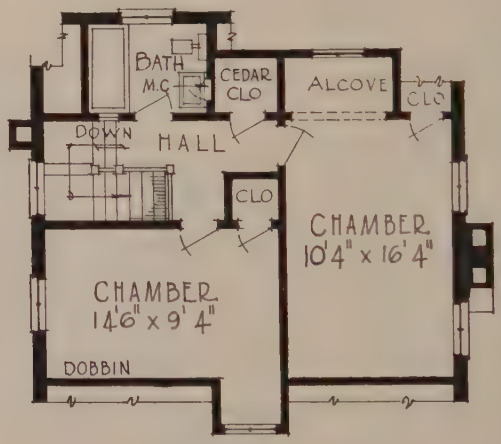
5 Rooms, Bath, Toilet and Alcove

The DOBBIN

DISTINCTIVE without being freakish, this home will appeal to those seeking something apart from the ordinary. It is constructed of stucco on structural clay tile. Such features as an incinerator, disappearing bed, cedar lined closet and built-in devices make this home modern in every way. The toilet on first floor is conveniently located.





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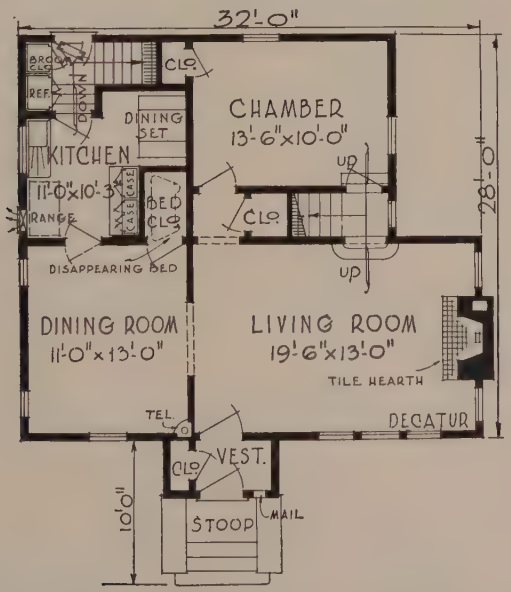
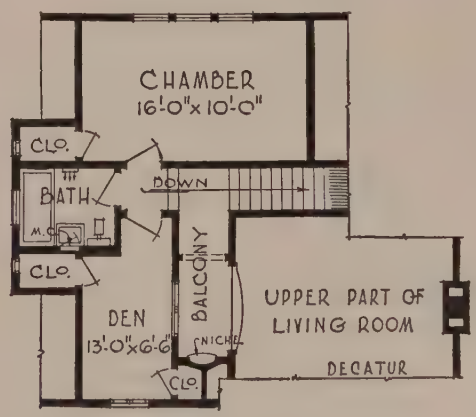
5 Rooms, Bath and Den

The DECATUR

A HOME of distinction with two carefully planned floors including a two-story living room, a completely equipped kitchen, a disappearing bed, and a cozy den on the second floor. Built-in features include a dining set, kitchen cabinets, broom closets, etc.





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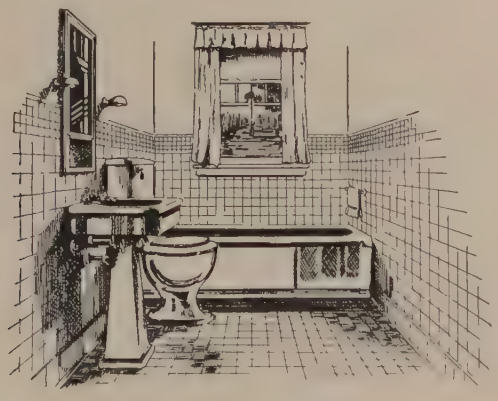
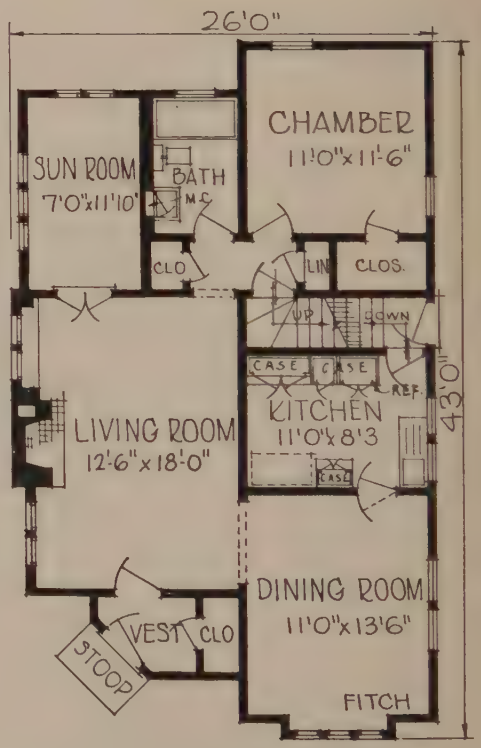
4 Rooms, Bath and Sun Room

The FITCH

STUCCO on metal lath is used for the exterior walls of this attractive bungalow. Notice the half-timbered treatment, impressive chimney of stucco and brick and the inviting entrance. Living room is large, with fireplace, and there is a clothes closet in the vestibule. Off the living room is a comfortable sun room. There is a model bathroom and a large bedroom, an efficiency kitchen with built-in cabinets and a front dining room of convenient size.



View of the model bathroom.



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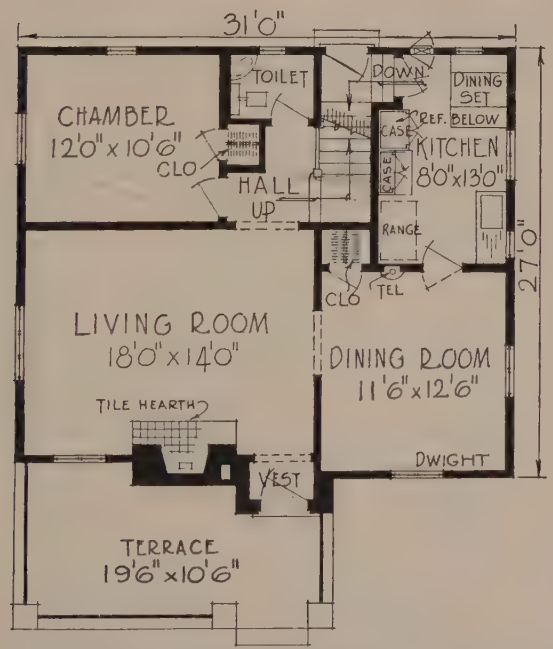
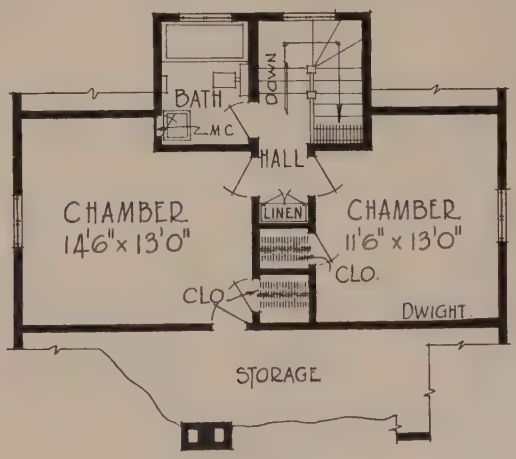
6 Rooms, Bath and Toilet

The DWIGHT

FEW small homes offer more in architectural merit than the Dwight. The imposing chimney and ornamental iron railing at the terrace give it a picturesque beauty.





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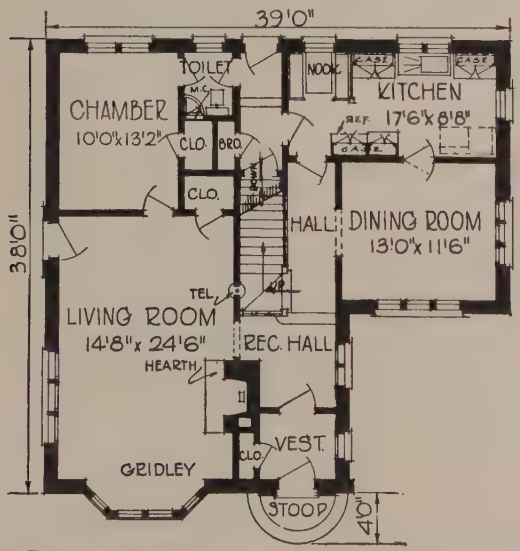
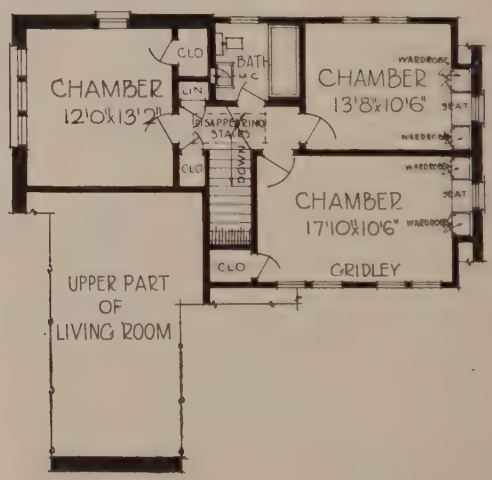
7 Rooms, Bath, Toilet and Nook

The GRIDLEY

STUCCO on cinder block are effectively used with the attractive half-timbered gables, dormers and unusual treatment of windows. Studio living room is large, with fireplace and built-in phone cabinet. There is a toilet on first floor. Efficiency kitchen with built-in cabinets. Upstairs are three large chambers, two of them having built-in wardrobes and window seats. There is a model bath and a disappearing stairway to attic.





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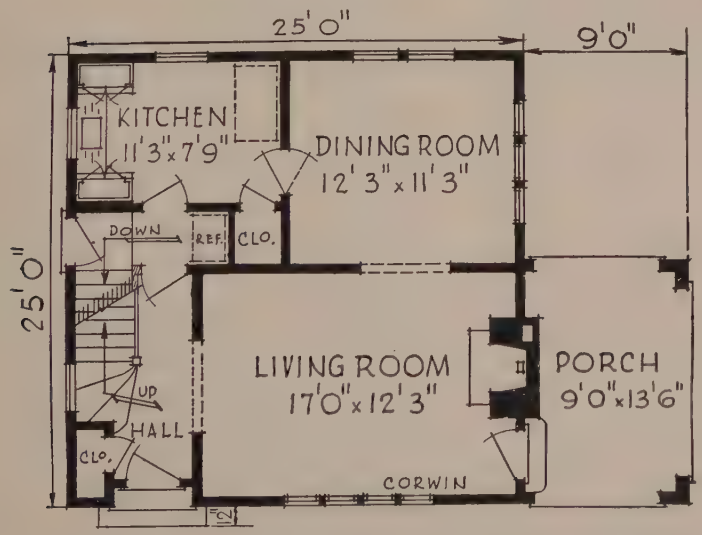
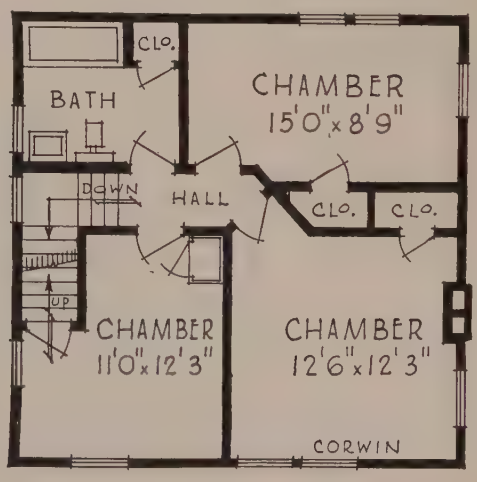
6 Rooms and Bath

The CORWIN

STUCCO, on metal lath, a pleasing roof and unusual window treatment help make this attractive home. There's an open porch, with a side entrance into living room, a charming front entrance, a convenient arrangement of rooms that assures unlimited comfort and ease. Note the splendid grouping of windows that means cheerful rooms.





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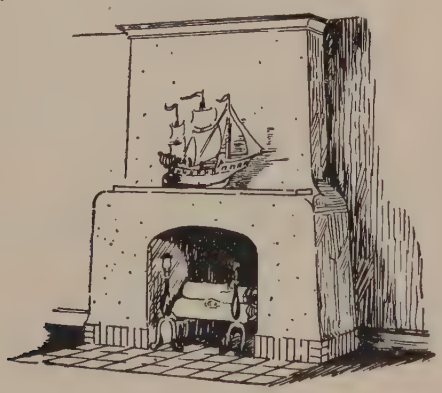
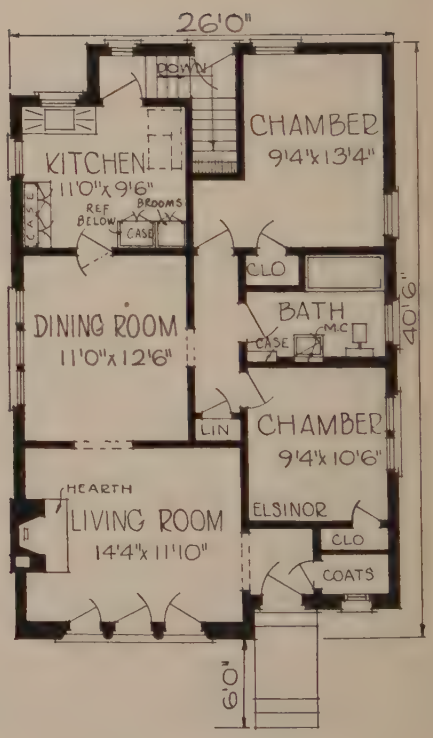
5 Rooms and Bath

The ELSINOR

THE PLAIN smooth cement block walls combined with the colorful tile roof, and the splendid grouping of living room windows are harmoniously blended into this pleasing home. A glance at the floor plan will show that every thought has been given to room arrangement and convenience. Living room has fireplace and kitchen has built-in broom and efficiency cabinets. There is an attractive bathroom, two comfortable chambers, a linen closet, and plenty of spacious clothes closets.



A fireplace to match the home



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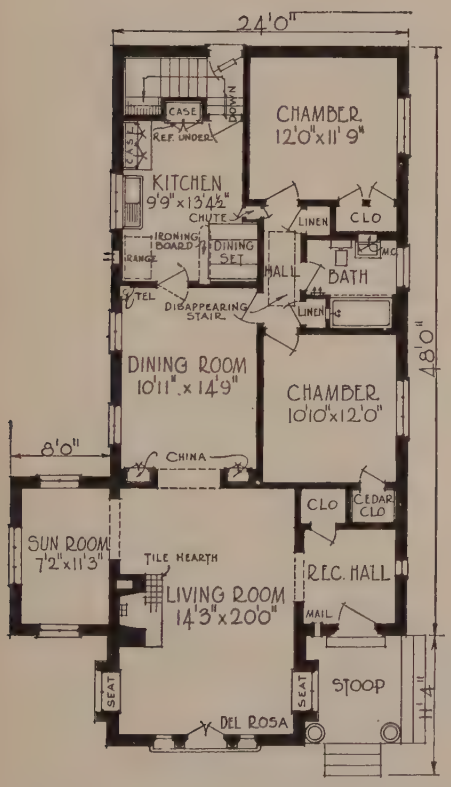
5 Rooms, Bath and Sun Room



The DEL ROSA

A SPANISH bungalow of cement block construction with tile roof. There is an excellent floor arrangement with modern efficiency kitchen, built-in dining set, telephone cabinet, built-in mail box, clothes chute and cedar-lined closet. A disappearing stairway leads from hallway to the attic.

View of Living Room

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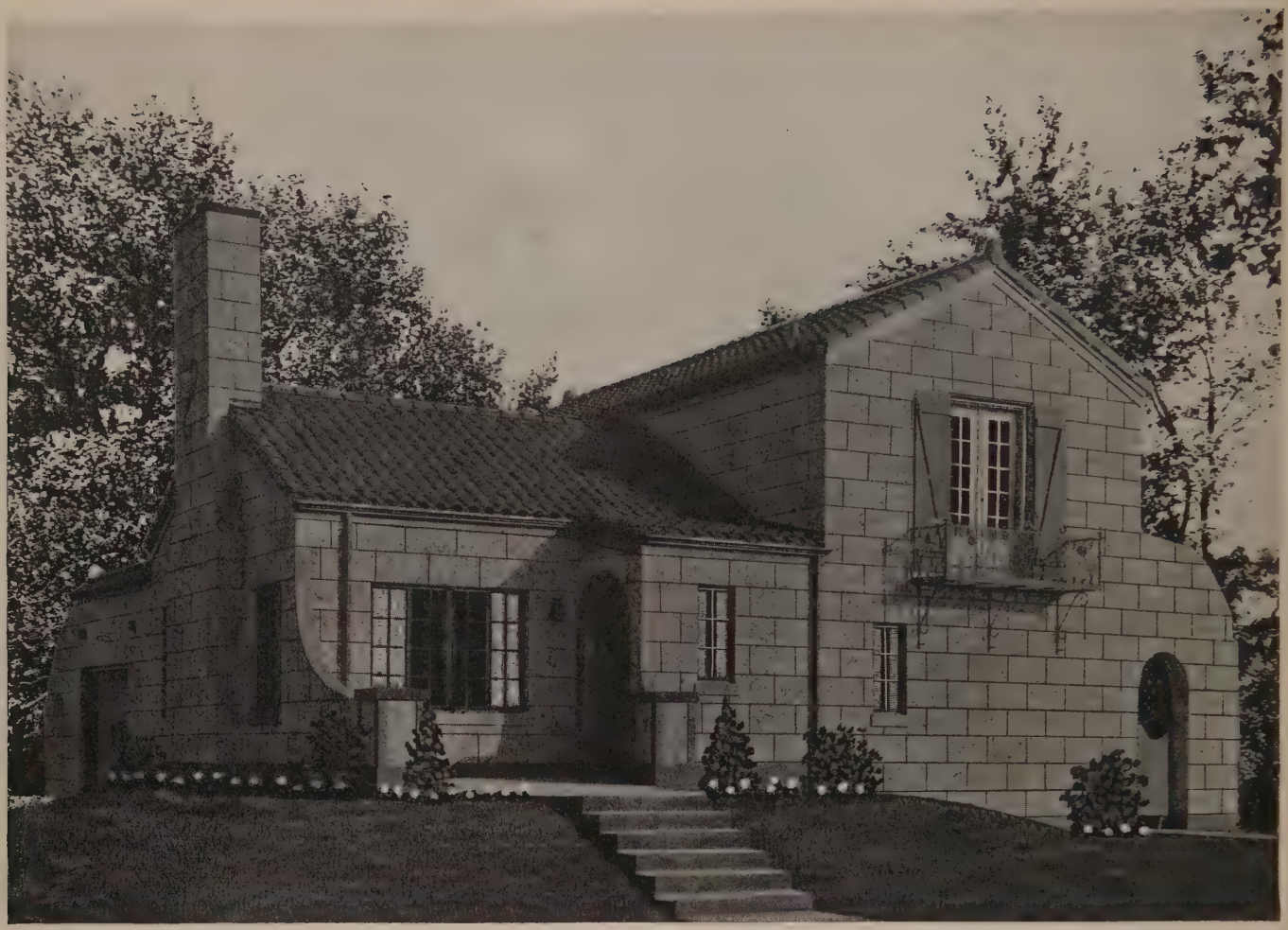
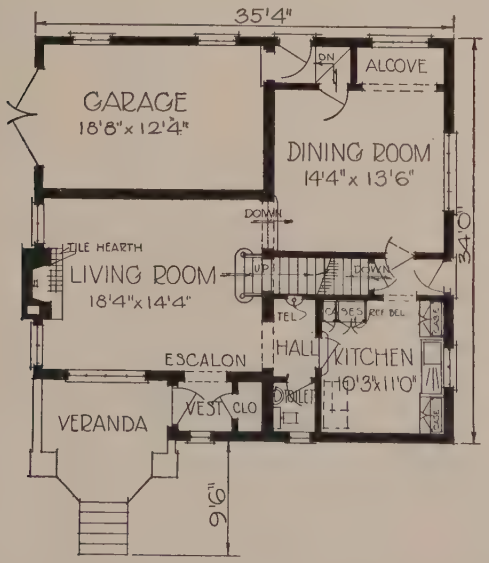


5 Rooms, Bath and Garage

The ESCALON

CEMENT blocks and a clay tile roof are used in designing this attractive well planned exterior. Note the veranda off the living room and the balcony at second floor window. Living room has fireplace and the dining room is alcoved. Kitchen has built-in cabinets. There is a phone cabinet at one end of the hall, and at the other a toilet. The upstairs plan shows two large chambers, a model bath and plenty of closets.



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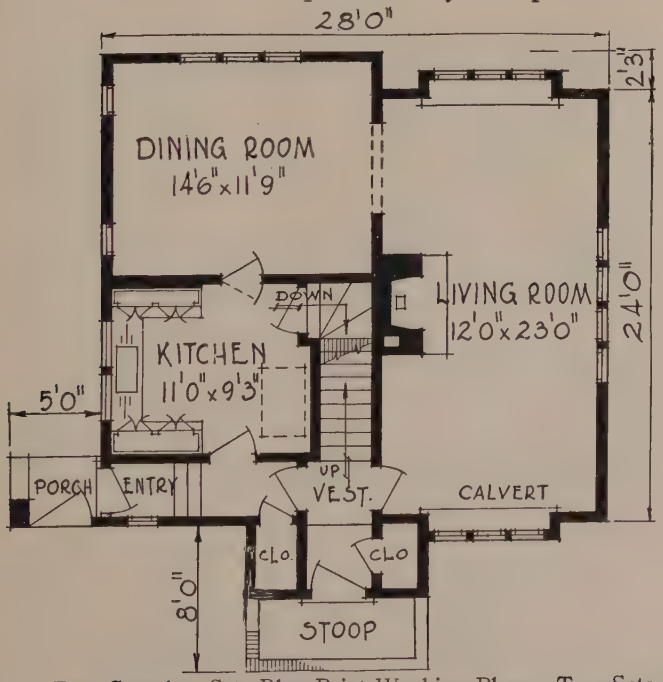
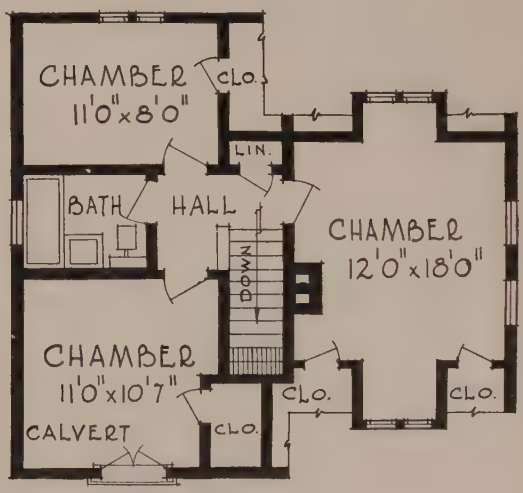
6 Rooms and Bath

The CALVERT

A STUCCO exterior, with ornamentation of trellis work and iron railing, gives this home a very attractive appearance. The kitchen is at front, with a side entrance, and the whole interior is particularly well planned. A home particularly suited to city or suburb.





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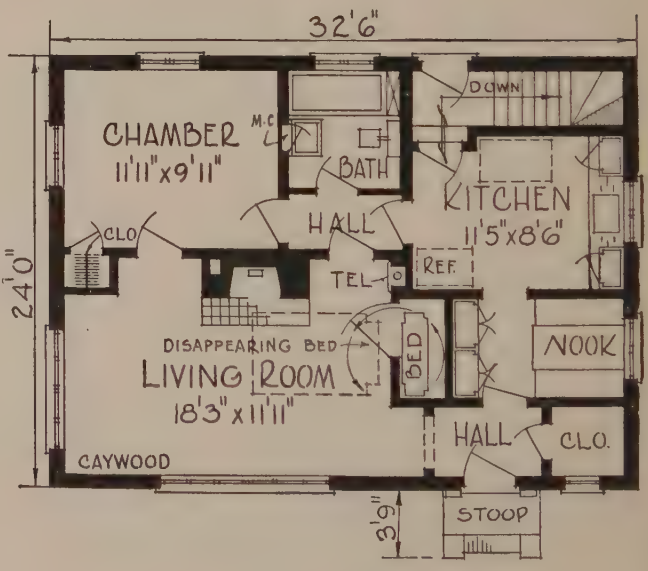
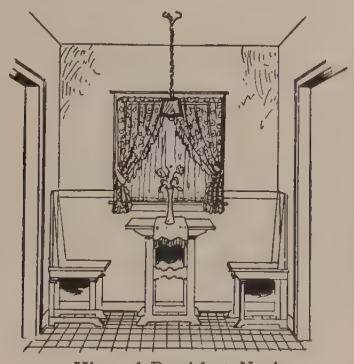
3 Rooms, Bath and Dining Nook

The CAYWOOD

THE thatched asphalt shingled roof helps to beautify this original and attractive bungalow of concrete blocks. Steel sash are used for windows. The three-room interior is carefully planned and includes disappearing bed, and large dining nook, space saving closets.





View of Breakfast Nook

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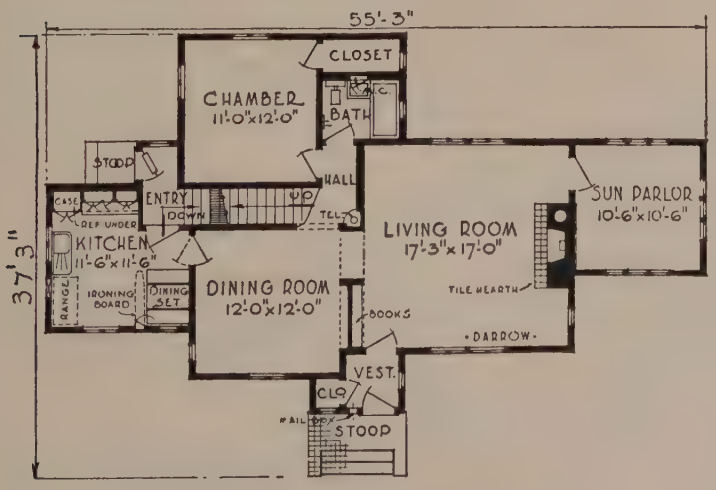
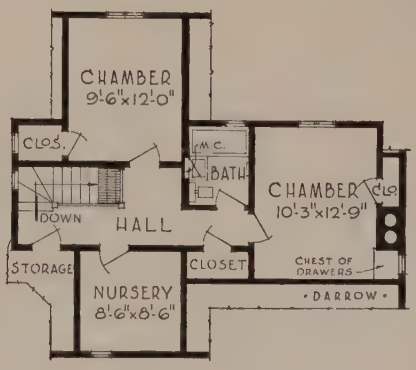
6 Rooms, 2 Baths, Sun Parlor and Nursery

The DARROW

THIS home has a distinctiveness all its own. Those having a large lot will search long before finding a home that will grace it better. It is strictly up to date having such advantages as a model kitchen, delivery receptacle in rear door and a built-in mail box, dining set and telephone cabinet. The kitchen arrangement merits careful study.





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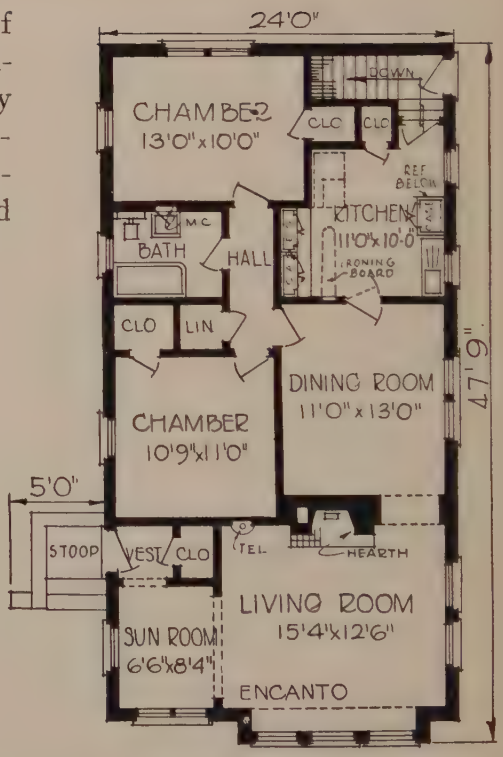
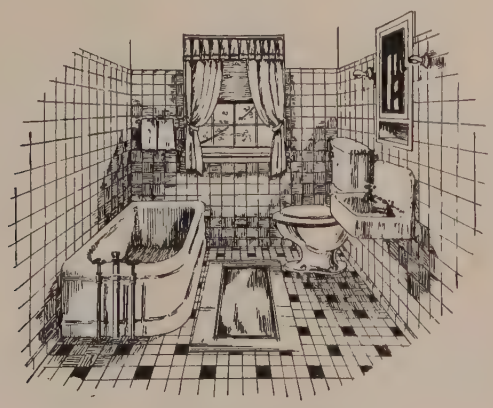
5 Rooms, Bath and Sun Room

The ENCANTO

A WELL designed bungalow of Spanish type with walls of cement blocks and roof of clay tile. Well arranged windows, casement type, and a canopied entrance form a pleasingly attractive exterior. A sun room is entered both from the vestibule and living room. Kitchen has ironing board and other built-in features. There are two large chambers, a model bath, and numerous closets including one in the vestibule.





An attractive bathroom

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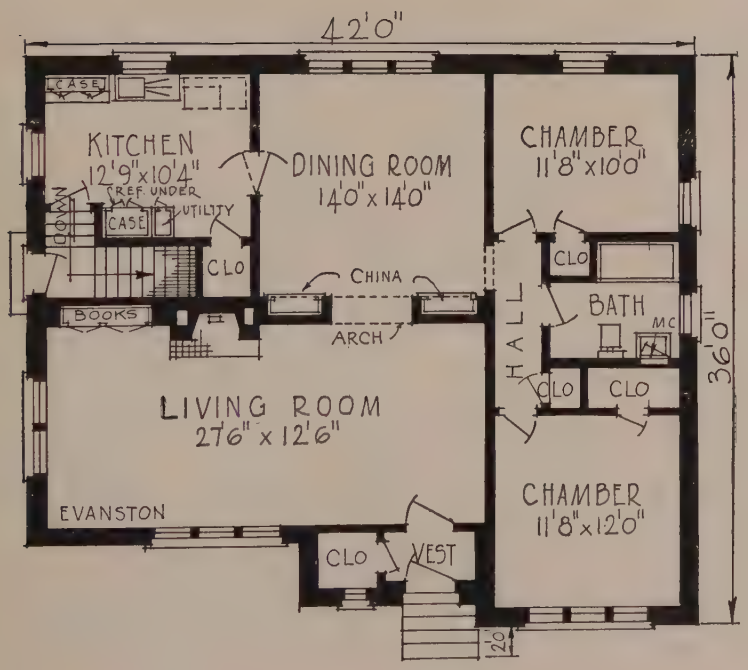
5 Rooms and Bath

The EVANSTON



An attractive English bungalow of stone construction for exterior walls. There is an inviting entrance and an archway at the left leading into the back yard. Note the large living room with fireplace and book cabinet, the arched doorway into dining room, the built-in china cabinets. Kitchen has built-in features. There are two chambers, bath and ample closet space.

An attractive archway with built-in cabinets

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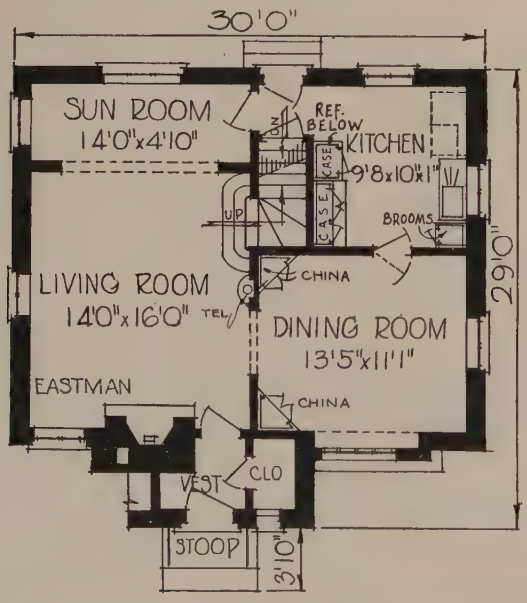
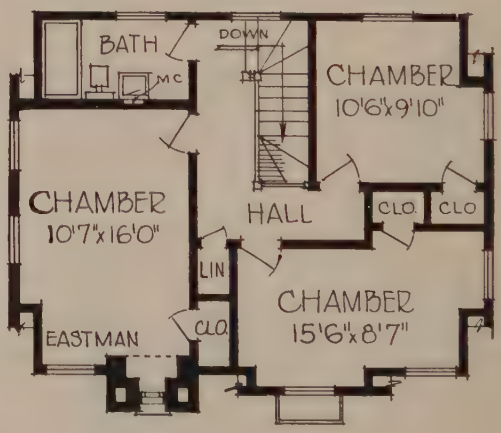
6 Rooms, Bath and Sun Room

The EASTMAN

HERE is an old English home of stone effectively combined with stucco and shingles. Note the ornamental window set in chimney. Kitchen has many built-in conveniences. There are built-in corner cabinets in dining room. Upstairs are three chambers, a modern bathroom and plenty of closets.





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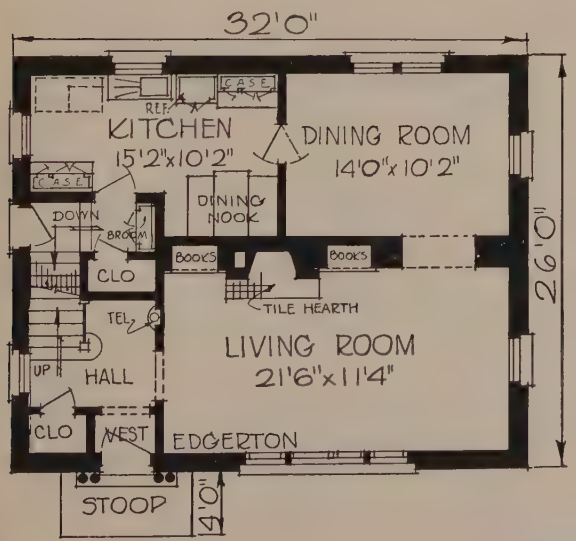
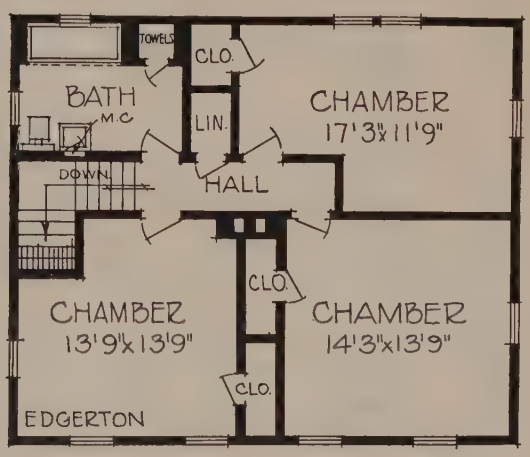
6 Rooms and Bath

The EDGERTON

THE FIRST story of stone harmonizes perfectly with the upper story of white siding in this attractive home. The second story windows are shuttered and those in the living room splendidly grouped. The large living room has a fireplace flanked with open book shelves. In the kitchen are such built-in features as dining nook, utility and broom cabinets, while in the hall is a phone cabinet. Upstairs there are three large chambers and a model bathroom with built-in towel cabinet. Large closets are always appreciated.





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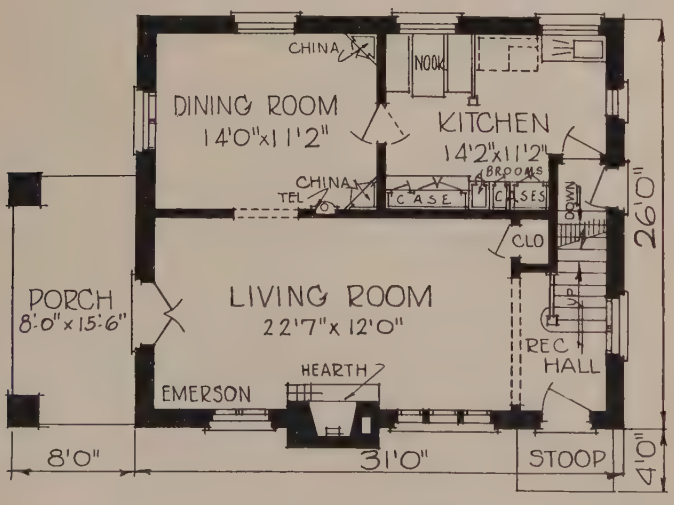
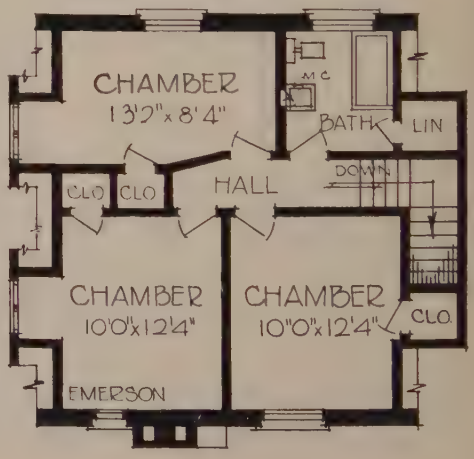
6 Rooms, Bath and Nook

The EMERSON

NOTICE the sweeping roof lines, the attractive dormers the imposing chimney of this very attractive home built of stone. At the left is large open porch and there is an inviting entrance leading into a reception hall with stairway to the floor above. Living room is large, with fireplace, and in dining room are built-in corner cabinets and phone cabinet. Kitchen has many built-in features including breakfast nook, efficiency cabinets, broom cabinet, etc. Upstairs are three large chambers, a bathroom, linen and clothes closets and a general arrangement that means much in convenience and comfort.





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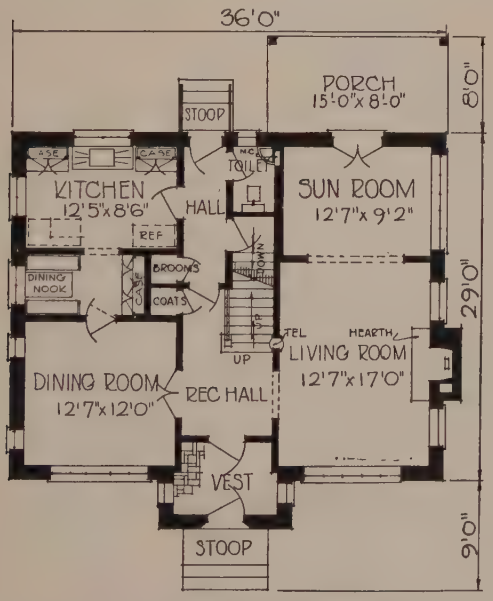
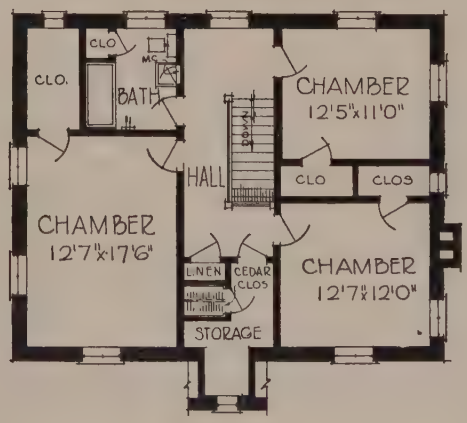
6 Rooms, Bath, Toilet, Dining Nook, Sun Room and Storage

The WYLIE

THE exterior walls of this unusual home are built of stone. Note the attractive entrance, the splendid arrangement of casement windows and dormer treatment at front roof line. Living room is large and has fireplace, built-in phone nook, and adjoining sun room. On the second floor, there are three chambers a cedar closet, and model bathroom.





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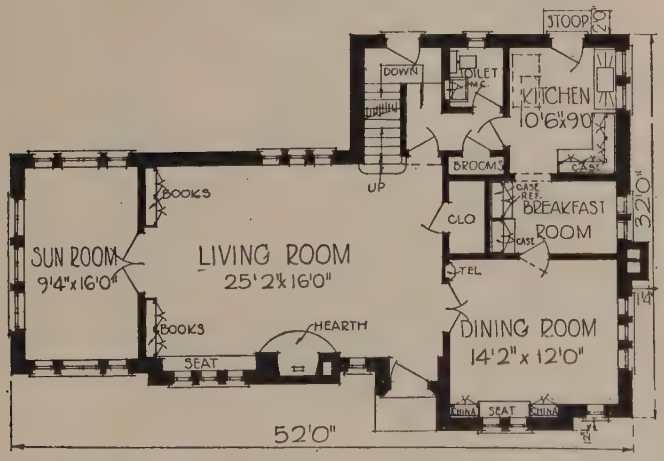
6 Rooms, Bath, Toilet, Sun Room and Dining Nook

The FRANCE

HERE is a particularly attractive home that utilizes stone for the exterior walls. Notice the unusual roof lines, the imposing chimney and the splendid arrangement of ornamental windows. There is a large living room with fireplace, built-in book cabinets and seat, and an adjoining sun room entered through French doors. Kitchen has built-in cabinets and broom closet. There is a large breakfast room with built-in cabinets. Dining room has built-in telephone nook, china cabinets and window seat. In the hall is a toilet, large broom closet and clothes closet. Upstairs there are three chambers, one of which has an alcove, a model bath with cabinet, linen closets, telephone cabinet and clothes closets.



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The FORD Garage

EVERY dollar that goes into this garage serves a purpose, yet it is attractive in appearance, well constructed and serviceable.

SIZES:

Plan No. 1.....10′ x 16′
Plan No. 2.....12′ x 18′

The CHEVROLET Garage

A HANDSOME one-car garage of extremely economical construction yet large enough to provide work space around the car.

SIZES:

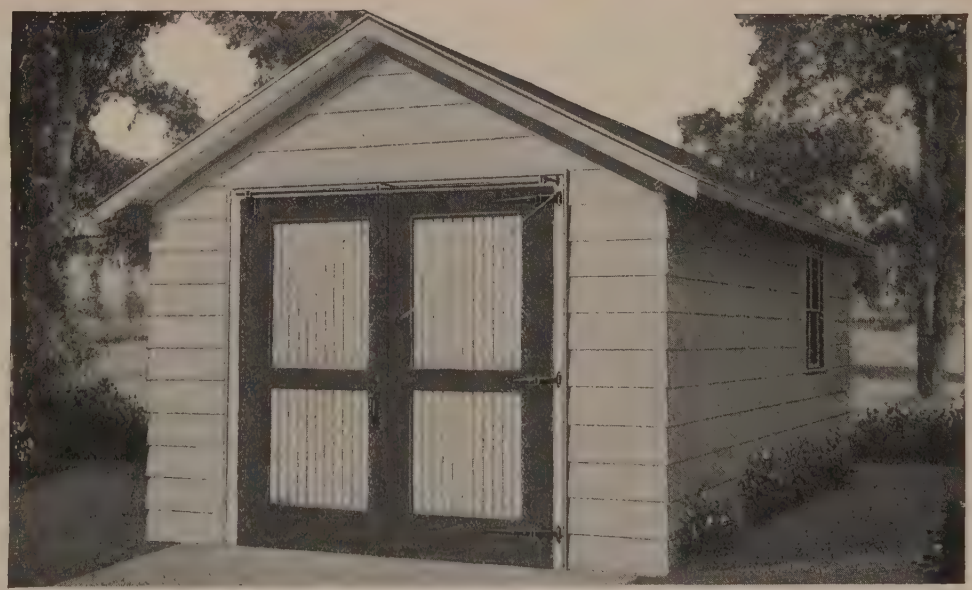
Plan No. 1.....12′ x 16′
Plan No. 2.....12′ x 18′

The GRAY Garage

THE "Gray" shows how every dollar is spent to the best advantage, but you will be pleased and surprised when you learn the actual cost. The plan gives clear details of construction.

SIZES:

Plan No. 1.....12′ x 18′
Plan No. 2.....14′ x 20′



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The DODGE Garage

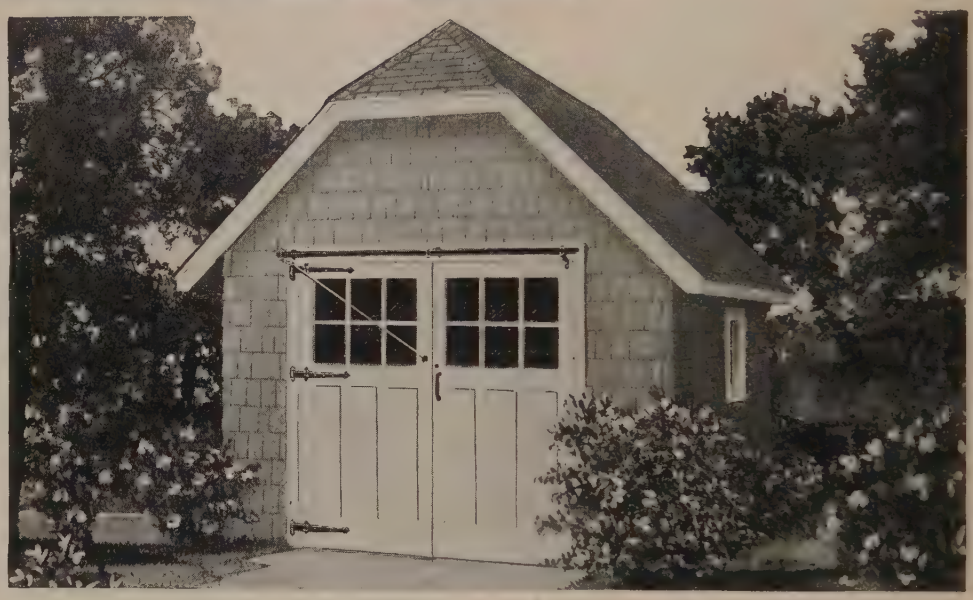
THIS trim design will accommodate one car and leave room to work around it. It will tone up and add value to the property.

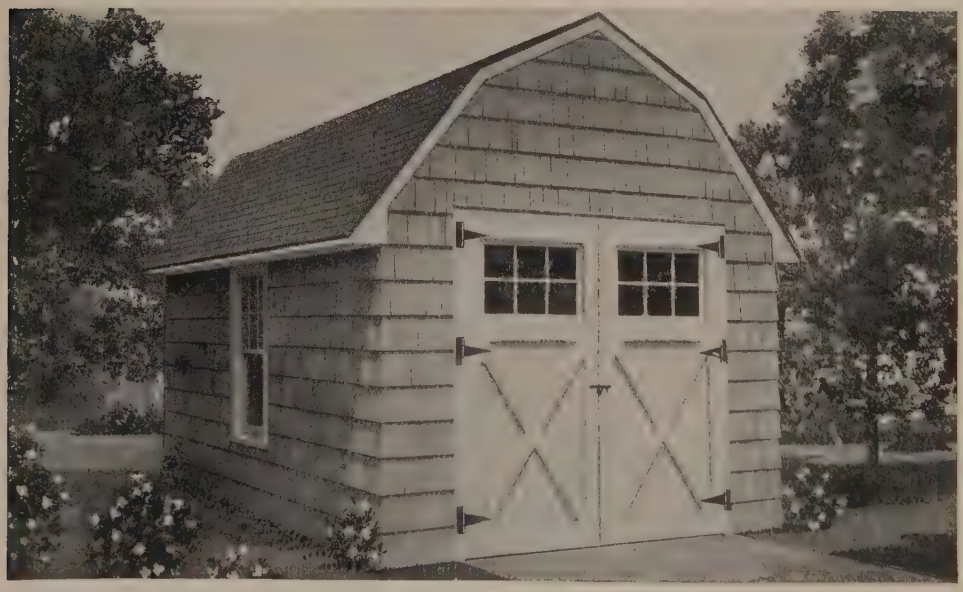
SIZES:
Plan No. 1.....12′ x 18′
Plan No. 2.....12′ x 20′

The BUICK Garage

THIS handsome one-car design, in addition to giving the car the shelter it needs, will no doubt match many homes of similar type.

SIZES:
Plan No. 1.....12′ x 18′
Plan No. 2.....12′ x 20′





The REO Garage

THE value and property is greatly enhanced by the addition of a neat garage to match the architectural style of the home.

SIZES:
Plan No. 1.....12′ x 18′
Plan No. 2.....14′ x 20′

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The CASE Garage

THIS neat one-car garage will tone up and add value to any property. It will accommodate even the largest cars and leave plenty of work space.

SIZES:

Plan No. 1.....12′ x 20′
Plan No. 2.....14′ x 22′

The CLEVELAND Garage

THE small investment required to build this one-car design will soon be returned in service, protection and satisfaction.

SIZES:

Plan No. 1.....12′ x 18′
Plan No. 2.....14′ x 20′

The STUTZ Garage

ALTHOUGH the car may be the best in the world it cannot give its greatest service without receiving good care and protection in return. This garage meets the needs of the car.

SIZES:

Plan No. 1.....14′ x 20′
Plan No. 2.....15′ x 22′

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The ESSEX Garage

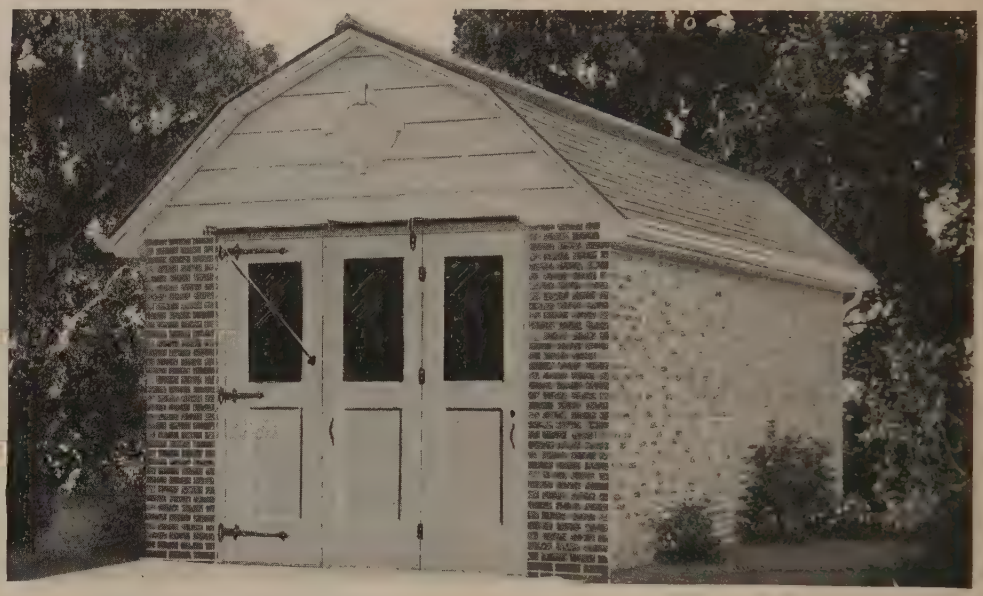
THE "Essex" provides a comfortable shelter for the car, besides, this design is very attractive and will add value to the property.

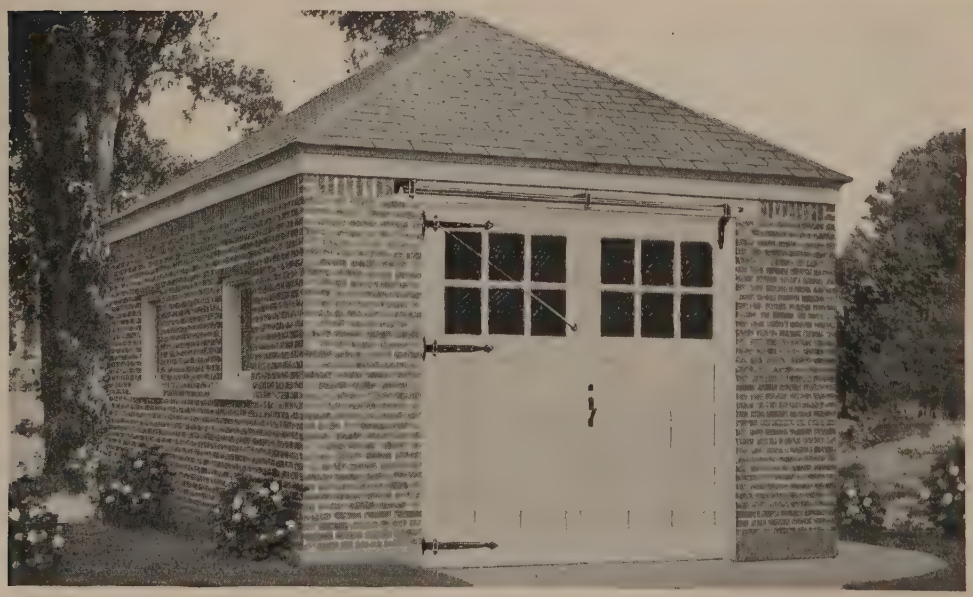
SIZES:
Plan No. 1.....12′ x 18′
Plan No. 2.....14′ x 20′

The JEWETT Garage

A BRICK garage designed to match a brick home of similar type. Substantial, attractive and providing plenty of work space around the car.

SIZES:
Plan No. 1.....12′6″ x 19′6″
Plan No. 2.....14′ x 21′6″





The NASH Garage

A NEAT, well constructed brick garage of this type is not only the practical shelter for the car but also adds to the value of the property.

SIZES:
Plan No. 1.....14′ x 20′
Plan No. 2.....14′ x 22′

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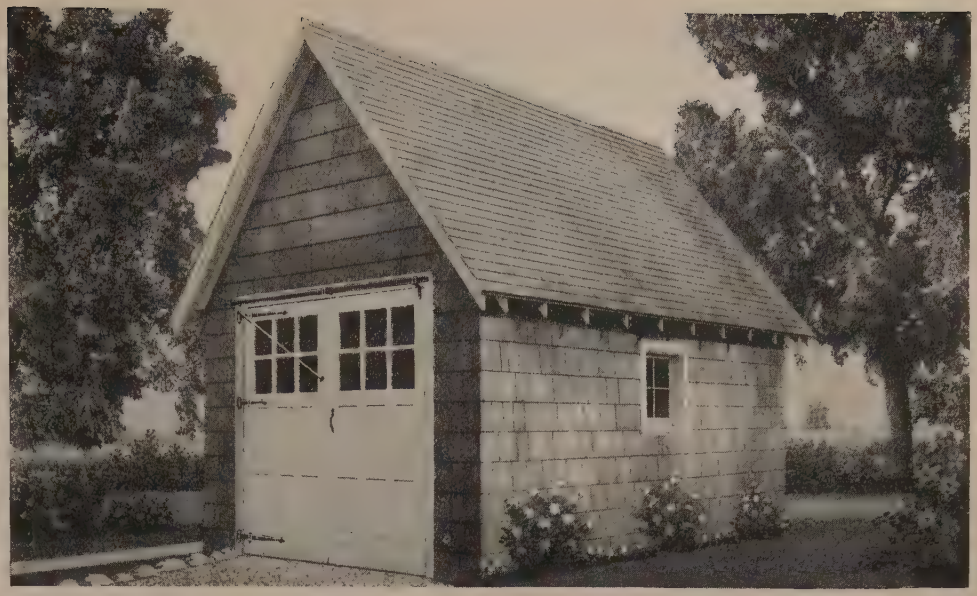
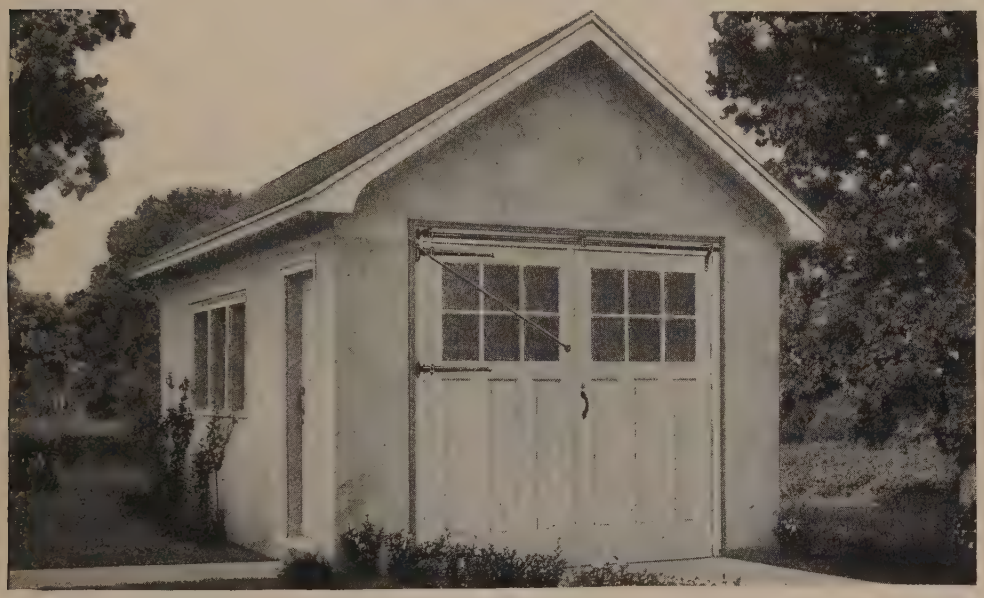
The CHANDLER Garage

IT is useless to spend more for a garage than the property or location calls for. Substantial construction and good hardware are essential for the protection of the car.

SIZES:
Plan No. 1.....12′ x 18′
Plan No. 2.....14′ x 20′





The EARL Garage

THE experienced driver appreciates the convenience of having his car near at hand and well protected at all times. Treat your car well and it will give you good service.

SIZES:
Plan No. 1.....12′ x 18′
Plan No. 2.....14′ x 20′

The WINTON Garage

A TWO-CAR garage can be built for considerably less than twice the cost of a one-car garage, and it is often real economy to do so. The extra space can be rented or can be used for storage, etc.

SIZES:
Plan No. 1.....20′ x 20′
Plan No. 2.....22′ x 22′

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The OVERLAND Garage

THE broken roof lines of the "Overland" give it an individuality at once apparent. It is a splendid type, well constructed and appropriate to any location.

SIZES:
Plan No. 1.....12′ x 18′
Plan No. 2.....14′ x 20′

The STAR Garage

A SHINGLE covered garage that will match many homes. Compact, but convenient in every respect. Plenty of light and work room.

SIZES:
Plan No. 1.....12′ x 16′
Plan No. 2.....14′ x 18′

The MAXWELL Garage

DISTINCTIVE and attractive, the "Maxwell" provides extra space for mechanical equipment and work shop. This garage deserves practical consideration by those who delight in automobile mechanics.

SIZES:
Plan No. 1.....16′ x 18′
Plan No. 2.....18′ x 20′

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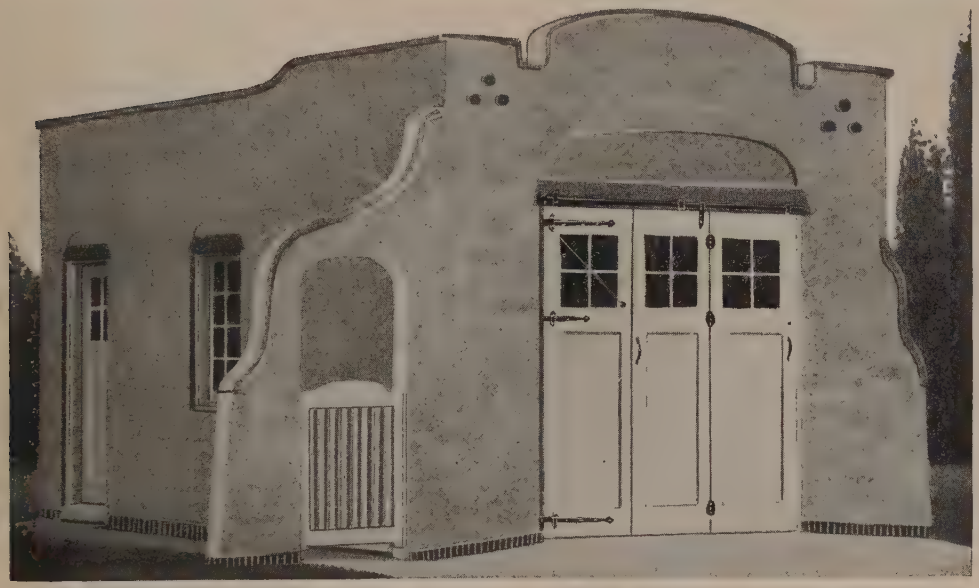
The FLINT Garage

THESE garages are not particularly designed to shelter the car as suggested by the name of the garage, but are designed to accommodate many different cars.

SIZES:
Plan No. 1.....12′ x 18′
Plan No. 2.....12′ x 20′



The MERCER Garage

ON ACCOUNT of such an attractive quantity of garages illustrated herein, it is no great task to find one that will harmonize with the architecture of the home.

SIZES:
Plan No. 1.....14′ x 22′
Plan No. 2.....16′ x 22′

The RICKENBACKER Garage

DESIGNED to match a home with roof of similar type. The construction is simple yet substantial. Plans show all essential details.

SIZES:
Plan No. 1.....12′ x 18′
Plan No. 2.....14′ x 20′

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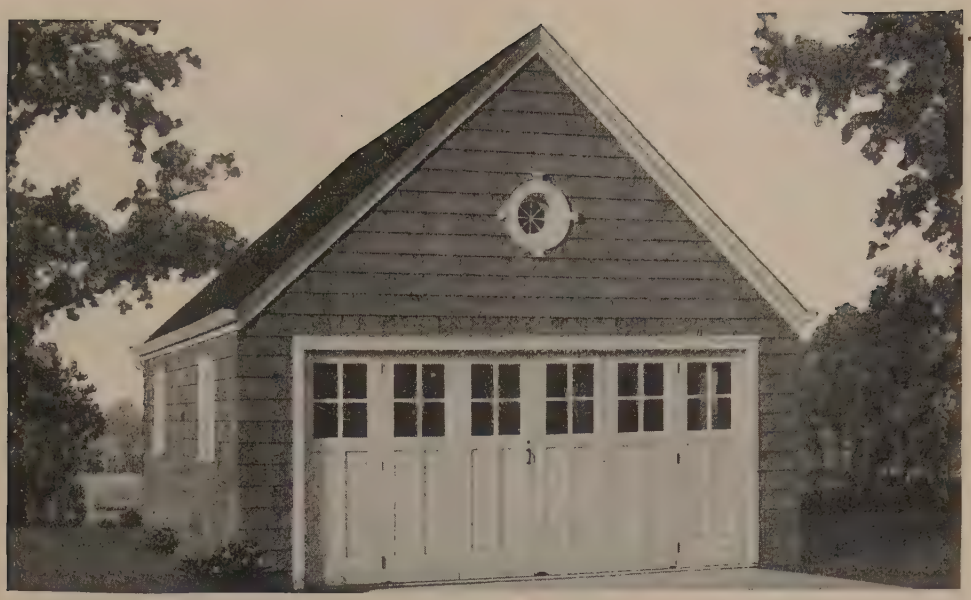

The WESTCOTT Garage

ROOM for 2 cars. A 6-door garage with doors to swing in and slide to sides on an overhead track. An appropriate garage for any seclusive location.

SIZES:

Plan No. 1.....20′ x 22′
Plan No. 2.....22′ x 24′

The CHRYSLER Garage

YOUR car needs protection as well as does other valuable property. A well-built garage with plenty of work space is not only a protection but is an asset as well.

SIZES:

Plan No. 1.....12′ x 20′
Plan No. 2.....14′ x 22′

The LA FAYETTE Garage

A PLEASING and valuable addition to any property and suitable to any seclusive neighborhood. Plenty of room and full protection for two cars.

SIZES:

Plan No. 1.....18′6″ x 22′
Plan No. 2.....20′ x 24′

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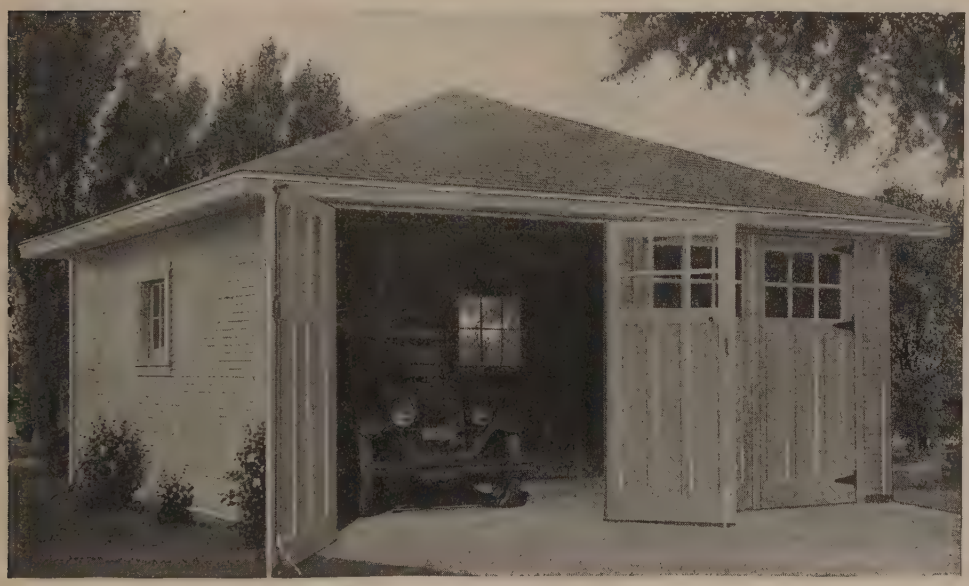
The COLUMBIA Garage

ATTRACTIVE, compact and warm. Designed to accommodate the medium sized car with sufficient space for work room.

SIZES:

Plan No. 1.....10′ x 18′
Plan No. 2.....12′ x 20′



The MOON Garage

A QUICK-LOCKING device for opening and closing the large doors is used. A lock that opens the big doors by merely turning the key: locking the doors top and bottom automatically by merely pushing the big doors shut.

SIZES:

Plan No. 1.....20′ x 18′
Plan No. 2.....22′ x 18′

The MARMON Garage

THE Tile Roof Cornice in front gives this two-car garage unusual distinction. Designed to accommodate the largest cars and still leave plenty of work space. Plans will give further particulars.

SIZES:

Plan No. 1.....21′3″ x 22′
Plan No. 2.....22′3″ x 24′

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The DORT Garage

THIS garage is designed to enable one to erect against one side of the home if one prefers. Or it can be built as a separate unit as shown in the illustration.

SIZES:

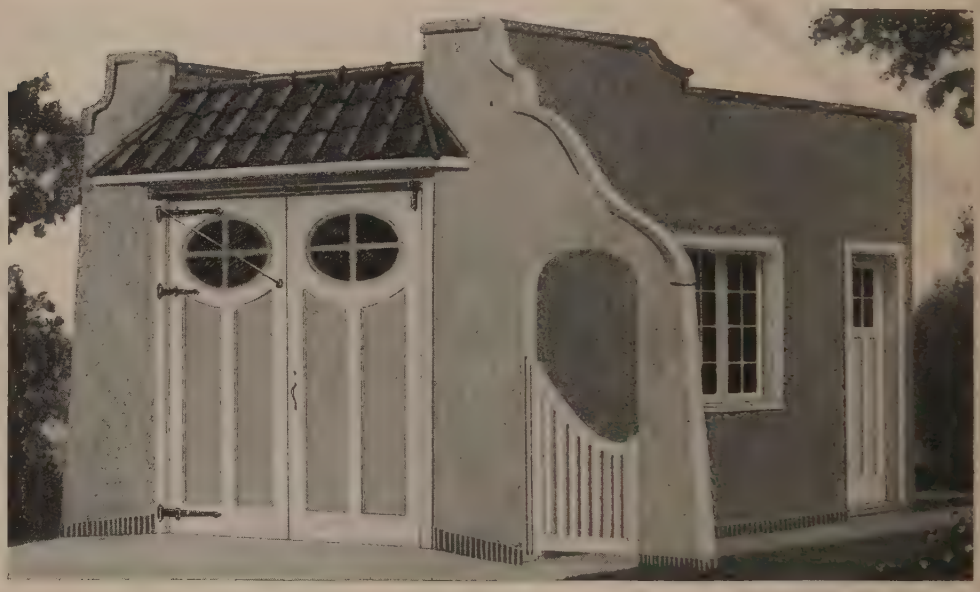
Plan No. 1.....10′ x 18′
Plan No. 2.....12′ x 20′

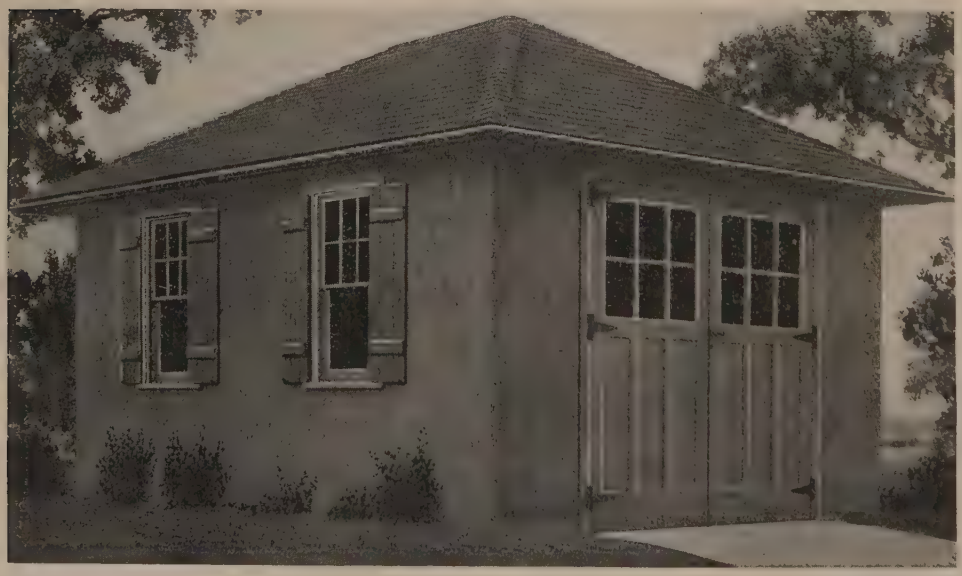
The JORDAN Garage

IF one erects a home of the Mediterranean type, then the garage should be of similar architecture and design. This garage, for instance, will match many homes of similar types.

SIZES:

Plan No. 1.....12′ x 20′
Plan No. 2.....14′ x 22′





The OLDSMOBILE Garage

ALL garages illustrated herein are of permanent and solid construction. They are designed to withstand the elements.

SIZES:

Plan No. 1.....14′ x 18′
Plan No. 2.....14′ x 20′

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The WHIPPET Garage

A well constructed design suitable to match stucco homes. The large doors fold and open on the overhead track and are equipped with modern garage door hardware.

SIZES:
Plan No. 1.....12′ 0″ x 18′ 0″
Plan No. 2.....14′ 0″ x 20′ 0″

The PONTIAC Garage

The structural clay tile outside walls insure warmth in the cold weather which every automobile owner appreciates. The large doors are equipped with modern garage hardware.

SIZES:
Plan No. 1.....12′ 4″ x 19′ 0″
Plan No. 2.....14′ 4″ x 20′ 0″

The WILLS SAINTE CLAIRE Garage

This attractive garage will match up well with the modern English type half-timbered home. The large doors are equipped with sliding tracks and complete modern hardware.

SIZES:
Plan No. 1.....19′ 0″ x 20′ 0″
Plan No. 2.....21′ 0″ x 22′ 0″

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The AUBURN Garage

THIS garage is constructed with outside walls of structural clay tile making it a very durable structure. The garage doors are equipped with modern hardware and inside sliding door tracks.

SIZES:
Plan No. 1.....19′ 0″ x 20′ 4″
Plan No. 2.....21′ 4″ x 21′ 8″

The ROAMER Garage

A SUITABLE garage for homes of similar type. The doors fold and swing to the side walls on overhead tracks. The doors are equipped with modern garage hardware.

SIZES:
Plan No. 1.....19′ 0″ x 20′ 0″
Plan No. 2.....20′ 0″ x 22′ 0″

The ELCAR Garage

WHEN doors are folded back on inside tracks, the entire front of the garage is open. Designed to match homes of similar type.

SIZES:
Plan No. 1.....20′ 0″ x 20′ 0″
Plan No. 2.....22′ 0″ x 22′ 0″

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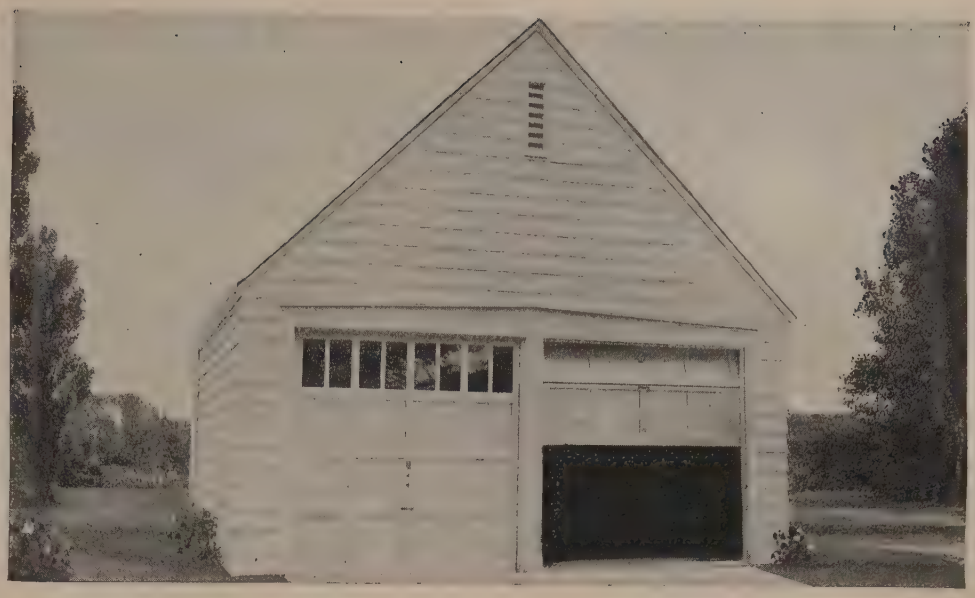
The FALCON Garage

AN ATTRACTIVE garage of frame construction to match similar designed home. Space for two large cars. Fully equipped with doors that are quickly operated by raising up over head.

SIZES

Plan No. 1.....18′ 0″ x 18′ 0″
Plan No. 2.....20′ 0″ x 20′ 0″



The MINERVA Garage

A HANDSOME garage designed to match houses of similar type. The roof is of colored asphalt shingles. The garage doors when opened slide up over head.

SIZES

Plan No. 1.....20′ 0″ x 18′ 0″
Plan No. 2..... ....22′ 0″ x 20′ 0″

The COMMANDER Garage

THE outside walls are face brick with durable roof of text blue gray slate. Designed for three large cars. The doors slide up over head, and if desired can be arranged to open automatically by using an electric opener.

SIZES

Plan No. 1.....31′ 0″ x 20′ 0″
Plan No. 2.....32′ 0″ x 22′ 0″

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The STEARNS KNIGHT Garage

HANDSOME enough and pretentious enough for anyone at any location. Substantial hardware is a good investment in protection.

SIZES:
Plan No. 1.....18′ x 20′
Plan No. 2.....20′ x 22′

The PEERLESS Garage

ACOMMODIOUS two-car design of solid, attractive construction. Adapted to sedan and roadster, touring car and truck or one half of garage may be rented.

Space on second floor is convenient.

SIZES:
Plan No. 1.....18′8″ x 24′
Plan No. 2.....20′ x 24′

The WILLYS KNIGHT Garage

THERE are no frills, yet it presents an attractive appearance. A selection of good hardware is important — it means protection.

SIZES:
Plan No. 1.....18′8″ x 20′
Plan No. 2.....20′ x 22′

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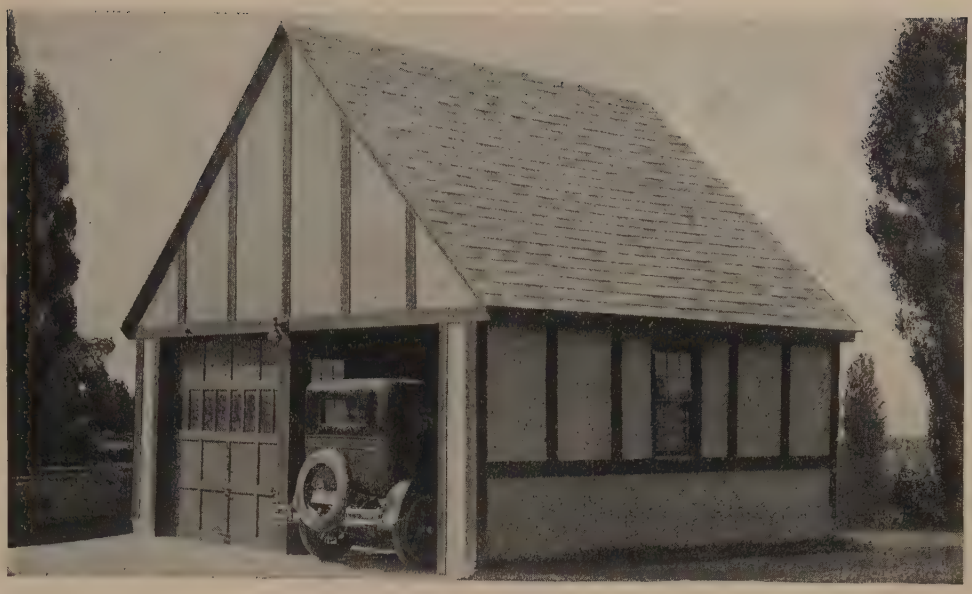
The FIAT Garage

DESIGNED to match stucco half-timbered homes. The roof is asbestos slate shingles. The doors roll up over head thereby occupying no space when open. Fully equipped with all hardware.

SIZES

Plan No. 1.....20′ 0″ x 18′ 0″
Plan No. 2.....22′ 0″ x 20′ 0″



The PRESIDENT Garage

AN ATTRACTIVE garage with face brick walls. Text blue gray slate roof. The garage doors slide up over head and are fully equipped with hardware.

SIZES

Plan No. 1.....21′ 0″ x 21′ 0″
Plan No. 2.....22′ 0″ x 22′ 0″

The LA SALLE Garage

TWO-CAR garage with outside walls of stucco on cinder concrete building blocks. Colored asbestos slate roof. The doors are designed to slide up over head.

SIZES

Plan No. 1.....19′ 8″ x 21′ 0″
Plan No. 2.....21′ 0″ x 22′ 0″

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The KISSEL Garage

THE "Kissel" is designed to match any brick home. It can be built as a separate building as illustrated or it can be placed against the side walls of an existing structure.

SIZES:

Plan No. 1.....11′ x 20′
Plan No. 2.....12′ x 22′

The STEPHEN Garage

PLENTY of room to work around the car and plenty of light and ventilation. Not costly, but practical and serviceable. The stucco walls and tile roof is a substantial combination.

SIZES:

Plan No. 1.....12′ x 18′
Plan No. 2.....14′ x 20′

The PIERCE ARROW Garage

CONSIDER the design of your house and other buildings before you make your final decision. Perhaps this handsome two-car garage will meet your requirements.

SIZES:

Plan No. 1.....20′6″ x 24′
Plan No. 2.....22′ x 26′

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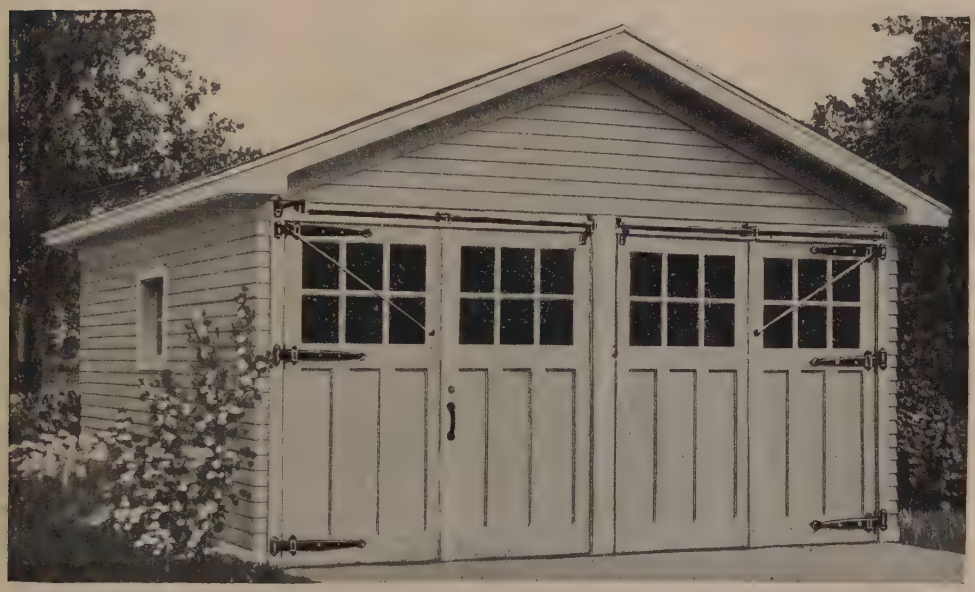
The OAKLAND Garage

A ONE-CAR garage designed to match stucco homes of Spanish or similar types. Well constructed and economical.

SIZES:
Plan No. 1.....12′ x 18′
Plan No. 2.....14′ x 20′



The FRANKLIN Garage

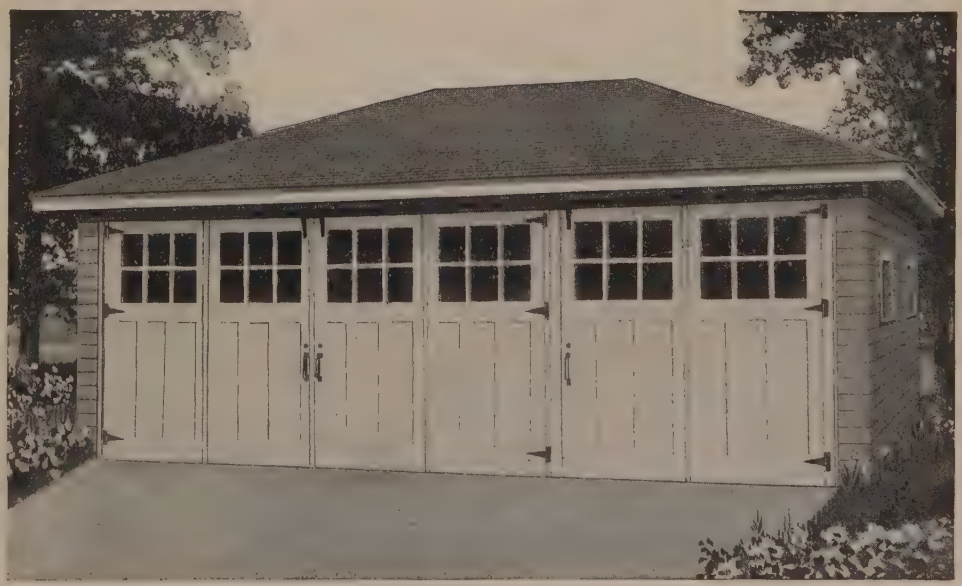
A NEAT two-car garage of substantial construction. Plenty of room to work around both cars at the same time. Not costly but practical and serviceable.

SIZES:
Plan No. 1.....18′ x 18′
Plan No. 2.....20′ x 20′

The HUDSON Garage

DESIGNED to accommodate three cars in a convenient manner. Plenty of space and work room around each car is provided.

SIZES:
Plan No. 1.....28′ x 20′
Plan No. 2.....30′ x 22′



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The McFARLAN Garage

A QUICK-LOCKING device for opening and closing the large doors is used. A lock that opens the big doors by merely turning the key; locking the doors top and bottom automatically by merely pushing the big doors shut.

SIZES:

Plan No. 1.....20′ x 22′
Plan No. 2.....22′ x 24′

The PACKARD Garage

HERE is a well designed brick garage which will give the maximum service. Planned for two large cars with the essential work space. Plans give further particulars.

SIZES:

Plan No. 1.....21′3″ x 24′
Plan No. 2.....22′3″ x 26

The LINCOLN Garage

A QUICK-LOCKING device for opening and closing the large doors is used. A lock that opens the big doors by merely turning the key; locking the doors top and bottom automatically by merely pushing the big doors shut.

SIZES:

Plan No. 1.....27′ x 24′
Plan No. 2.....27′9″ x 26′

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The COLE Garage

THIS garage is not only sturdy in construction but attractive and a suitable match for many brick homes. Plenty of work room for two cars.

SIZES:
Plan No. 1.....18'6" x 22'
Plan No. 2.....20'6" x 24'

The CUNNINGHAM Garage

THE illustration shows just how the garage looks after completion. Strong, attractive, with brick walls and room for two large cars.

SIZES:
Plan No. 1.....20' 8" x 21'6"
Plan No. 2.....22'10" x 23'6"

The DUESENBERG Garage

FACE brick walls and tile roof offer solid and attractive protection. This garage will match many attractive homes with similar roofs. Plans provide for plenty of work space for 2 cars of large size.

SIZES:
Plan No. 1.....19'10" x 21'6"
Plan No. 2.....21' 3" x 22'6"

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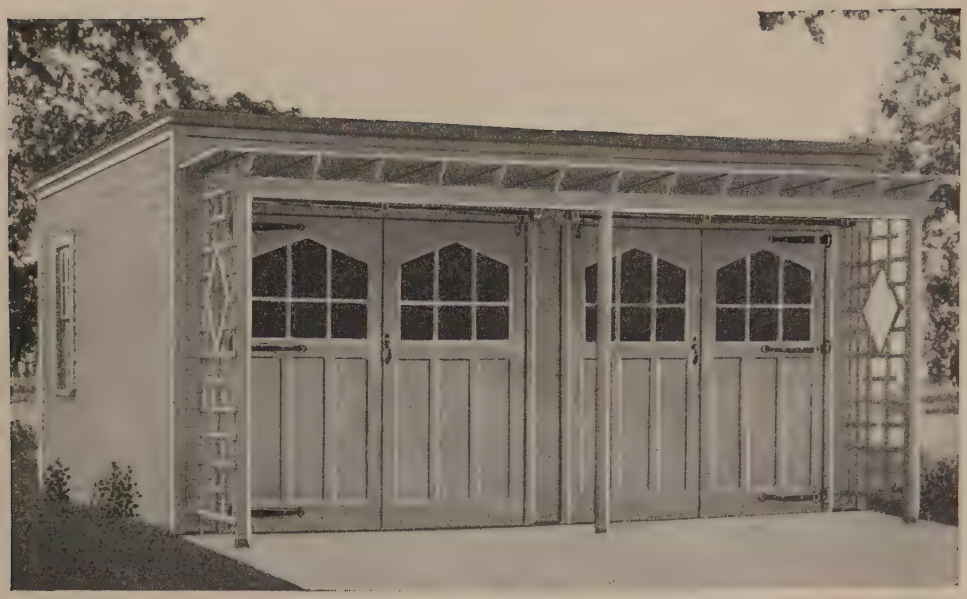


The HUPMOBILE Garage

THE roofed Pergola is not only attractive but is a protection appreciated by those who tinker around their cars on rainy days and bad weather. A very serviceable garage for two cars.

SIZES:

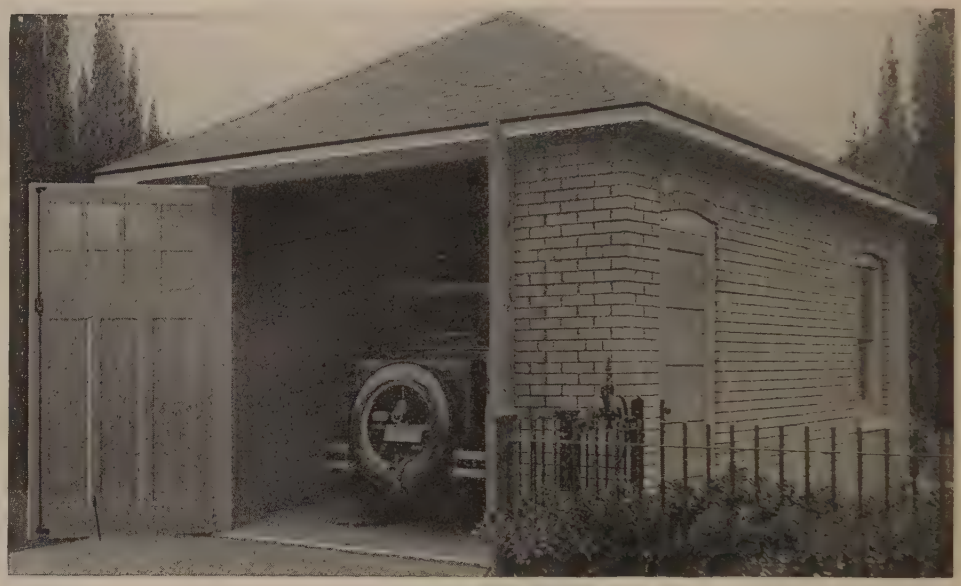
Plan No. 1.....20′ x 18′
Plan No. 2.....22′ x 20′

The VELIE Garage

A QUICK-LOCKING device for opening and closing the large doors is used. A lock that opens the big doors by merely turning the key: locking the doors top and bottom automatically by merely pushing the big doors shut.

SIZES:

Plan No. 1.....12′8″ x 20′
Plan No. 2.....14′ x 20′



The LOCOMOBILE Garage

A QUICK-LOCKING device for opening and closing the large doors is used. A lock that opens the big doors by merely turning the key: locking the doors top and bottom automatically by merely pushing the big doors shut.

SIZES:

Plan No. 1.....12′4″ x 22′
Plan No. 2.....13′ x 24′

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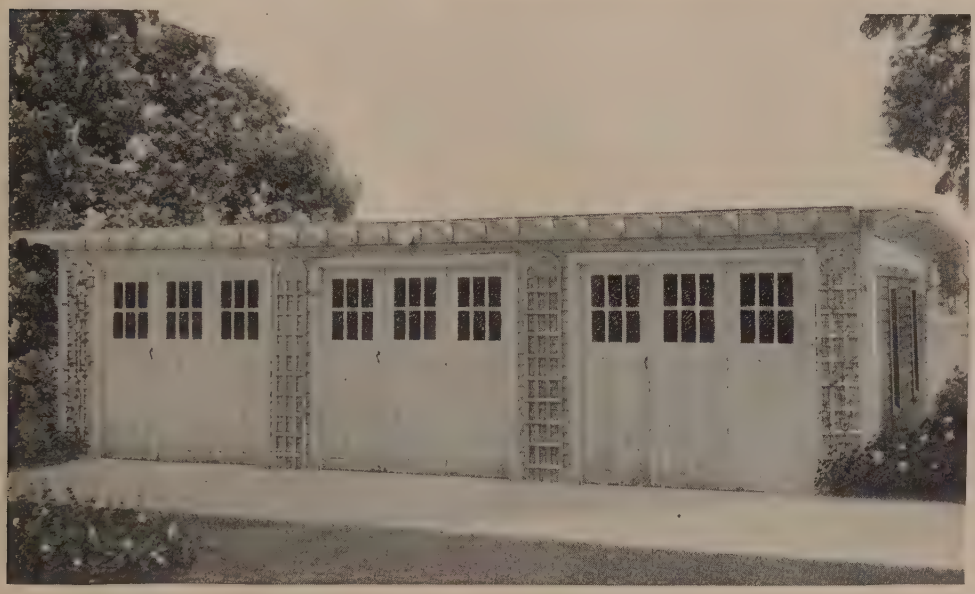
The STUDEBAKER Garage

THIS beautiful half timbered stucco garage is designed not only to comfortably accommodate two cars, but to match up with similar types of stucco homes.

SIZES:
Plan No. 1.....20′ x 20′
Plan No. 2.....22′ x 22′



The PAIGE Garage

A THREE-CAR garage which will match almost any type of home. Provision is made for plenty of work room around each car.

SIZES:
Plan No. 1.....30′ x 20′
Plan No. 2.....32′ x 22′

The CADILLAC Garage

A GARAGE substantially designed in brick with tile roof. Will comfortably accommodate three large cars, with plenty of work space.

SIZES:
Plan No. 1.....32′ x 20′
Plan No. 2.....34′ x 22′

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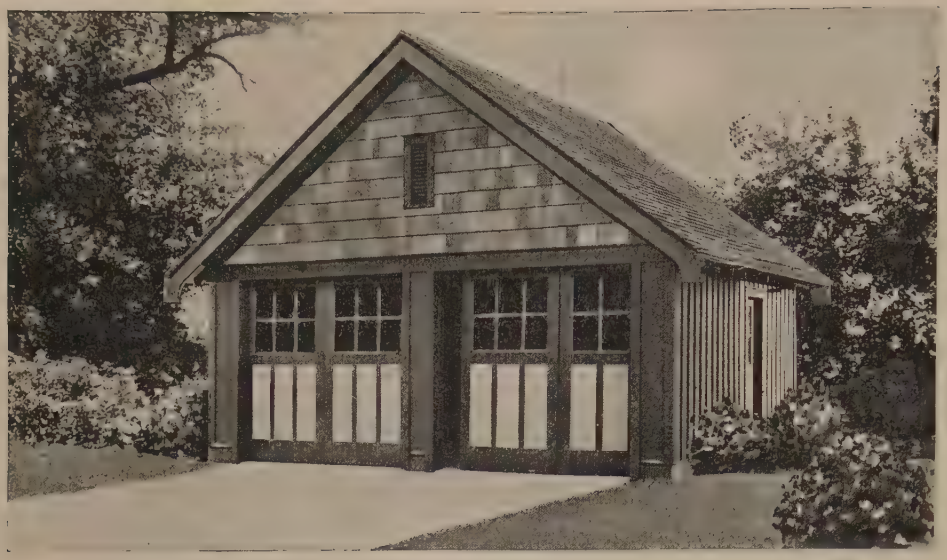

The EADES Garage

THIS attractive garage is designed to match with almost any type of home. The doors are equipped with modern hardware. Planned to accommodate two cars of large size.

SIZES:

Plan No. 1.....18'8" x 20'
Plan No. 2.....20' x 22'

The BLACKHAWK Garage

WITH outside walls of siding to match the home of similar type, this garage is complete, substantial and warm. The convenience of overhead sliding doors is always appreciated.

SIZES:

Plan No. 1.....18' x 18'
Plan No. 2.....20' x 20'

The PLYMOUTH Garage

A TWO car garage designed with thatched shingle roof to match homes of similar design well equipped with practical easy working door hardware.

SIZES:

Plan No. 1.....20' x 18'
Plan No. 2.....22' x 20'

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The CENTURY Garage

NEAT and compact yet of sufficient size for the ordinary size of car. It is equipped with first class hardware. It can be built at a moderate cost.

SIZES:
Plan No. 1.....12′ x 18′
Plan No. 2.....14′ x 20′

The CONTINENTAL Garage

THE HOOD over the front doors is appreciated by those who tinker with the car on rainy days. It offers plenty of space for two large size cars.

SIZES:
Plan No. 1.....20′ x 20′
Plan No. 2.....21′ x 22′

The FLYING CLOUD Garage

THIS two car garage is simple yet of substantial construction. It is a very popular type as it will match in style a great many houses. The cost of building is moderate.

SIZES:
Plan No. 1.....20′ x 20′
Plan No. 2.....22′ x 22′

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The PREMIER Garage

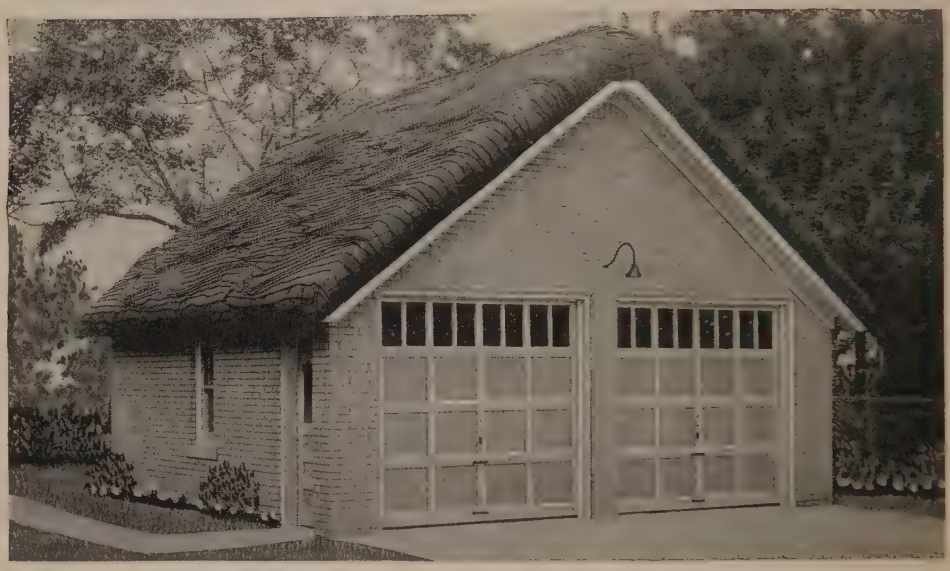
DESIGNED to match home with similar roof. Will accommodate cars of any make. The doors slide up overhead; therefore, are not in the way at any time.

SIZES:
Plan No. 1.....21'0" x 21'0"
Plan No. 2.....22'0" x 22'0"

The ROLLS Garage

A SUBSTANTIAL garage of face brick walls with thatched shingle roof. Doors are equipped with tracks and hardware to allow them to slide up overhead.

SIZES:
Plan No. 1.....21'6" x 20'0"
Plan No. 2.....22'10" x 22'0"



The ROYCE Garage

WELL designed and pretentious this garage offers plenty of space for two large cars. It is equipped with doors to slide up overhead. It will improve the property.

SIZES:
Plan No. 1.....22'3" x 22'0"
Plan No. 2.....23'8" x 24'0"

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More Attractive Filling Stations for Your Neighborhood

The NORTH

NORTH—Brick combined with tile, stucco finish, forms the attractive exterior of this filling station of English type. There is a slate roof. Windows show attractive awnings.

The SOUTH

SOUTH—Built of stone with a tile roof. Steel sash are used throughout. This makes an exceptionally attractive filling station, and will greatly improve any neighborhood.

The EAST

EAST—The exterior is of stucco on structural clay tile. Note the impressive brick chimney. This filling station can be very economically built and is unusually attractive.

The WEST

WEST—Face brick combined with stucco forms the attractive exterior walls of this attractive filling station of old English type. Roof is mottled slate random laid.

Complete Plans Are Available

Blue-print plans of any of the above filling stations will be mailed immediately upon receipt of order and remittance to cover—Price $20.00.

Plans can be prepared and furnished for specially designed Filling Stations at reasonable prices. Send us your ideas, let us improve them.

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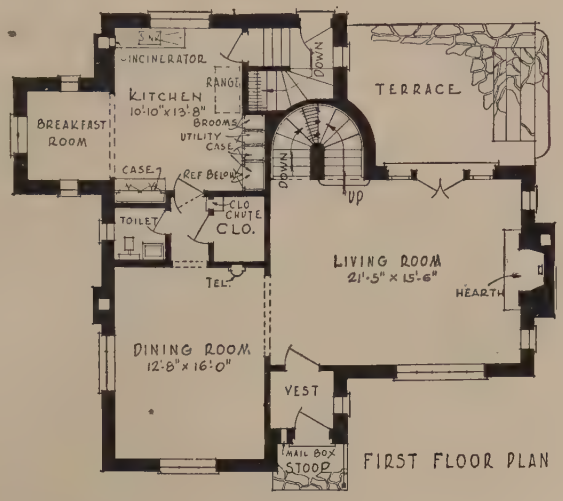
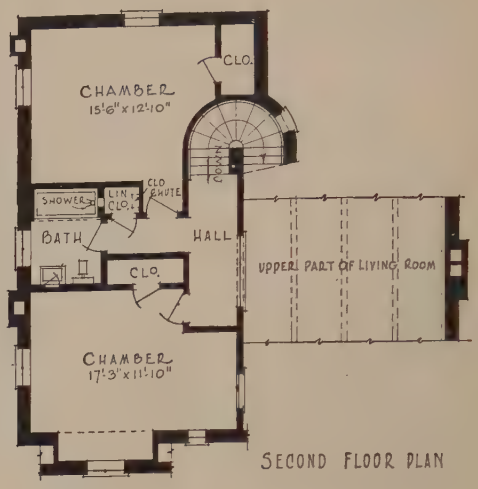
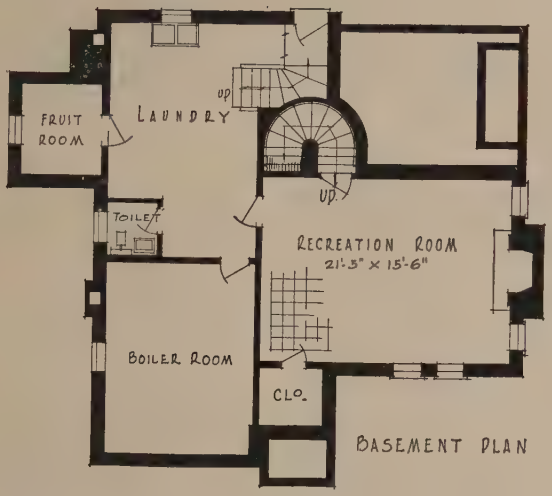




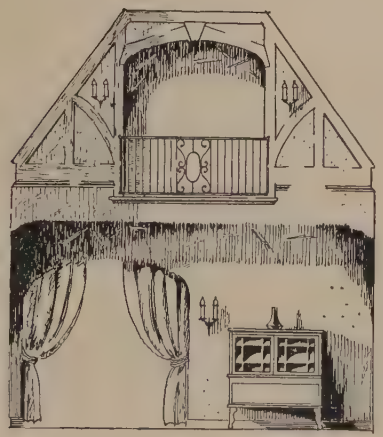


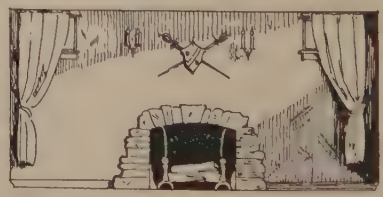
Study these three floor plans carefully. They will show you the possibilities of modern home building at a moderate cost.

Note the well arranged first floor. The numerous built-in conveniences. See the splendid arrangement of the second floor. The large size of chambers.

Look at the basement plan with its big recreation room, splendid laundry, boiler room and fruit room.

An unusually attractive home because it is well designed and there are three floors to "live" in, and every room arranged for the greatest comfort and convenience.





Here are some details of this splendid home. *Right*—An unusually attractive fireplace in the basement recreation room (*below*) as well as in the living room (*above*). *Left*—A detail of studio living room showing railed balcony at second floor, and archway to dining room.

Homes Designed to Order

We maintain a department which is devoted exclusively to the production of special plans—by architects skilled in design, by draftsmen who are accurate and practical.

This department renders dependable architectural service, furnishes plans, etc.

Gives general and sound advice and help in all matters pertaining to home building.

Should any reader of HOME BUILDERS CATALOG desire a specially designed home, you are not confined to the selection of the houses illustrated in this issue, carefully selected and attractive as they are.

We are particularly well equipped to supply plans to meet with individual ideas. Furnish ideas for unusually attractive exterior designs and treatments. Make suggestions for exceptionally arranged interiors embodying the newest, most modern thoughts and details to bring the acme of convenience and comfort to the home.

A study of the home shown above (in course of construction) and of the plans and details on opposite page will convince anyone that here is a home good to look at and convenient and comfortable to live in.

The owner of this home gave us carte blanc. Told us he desired a "real" home, but wanted to keep the building costs within reasonable bounds. This was done.

While there is nothing lacking either inside or out to make this home perfect, every detail has been so carefully worked out, every move so carefully studied, that a home of this character is within reach of anyone of moderate means.

While there is no unnecessary waste of material, no unnecessary loss of time in building because of the exceptional accuracy of the plans, nothing has been skimped and everything entering into the house is of the highest quality.

No matter how small the home is to be or how modest the budget for building, our Special Plan Department enables anyone to secure accurate and valuable architectural service and advice at so moderate a cost that it is within the reach of all. Address Architectural Department HOME BUILDERS CATALOG, 75 East Wacker Drive, Chicago, Illinois.

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